



9<sup>TH</sup> ANNUAL  
UNDERGRADUATE SYMPOSIUM

DISCOVER · CREATE · SHARE

**Friday, April 29, 2016**

9 AM – 4 PM

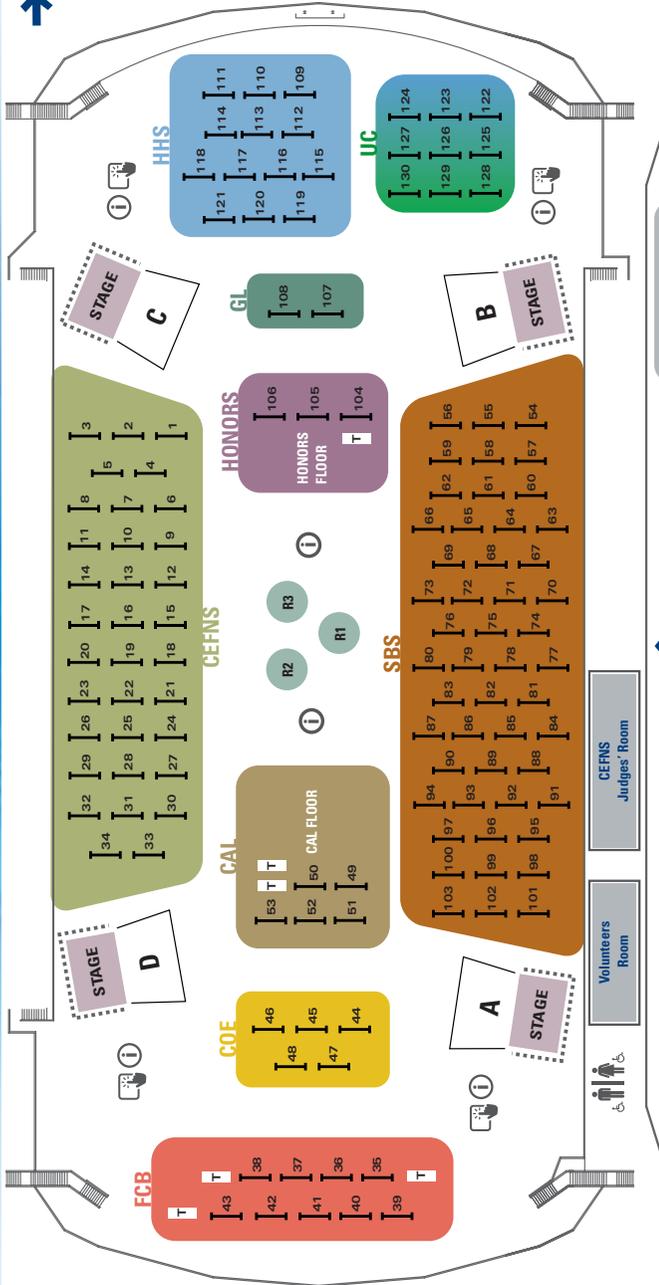
J. Lawrence Walkup Skydome



NORTHERN ARIZONA UNIVERSITY

[nau.edu/symposium](http://nau.edu/symposium)

# DOME FLOOR MAP



**📍 CHECK-IN / Main Entrance**

## EAST CONCOURSE

Skydome East Concourse  
ADA Section  
IWP - Video Gaming Symposium

**POSTER DISPLAY BOARD**

- FCB** The W.A. Franke College of Business
- COE** College of Education
- CAL** College of Arts and Letters
- CEFNBS** College of Engineering, Forestry, and Natural Science
- SBS** Social and Behavioral Sciences
- HONORS** University Honors Program
- GL** Global Learning Program
- HHS** College of Health and Human Services
- UC** University College

**POSTER DISPLAY BOARD**

- D**
- B**
- C**
- A**

**POSTER DISPLAY BOARD**

- 1-130**

**POSTER DISPLAY BOARD**

- 📍 KIOSK**
- 📍 PRESENTATION STAGE**
- 📍 ROUNDTABLE**
- 📍 INFORMATION MAP**
- 📍 DISPLAY TABLE**

**NOT TO SCALE**

# Message from the President

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Dear Students, Faculty Mentors, and Guests,

I am privileged to welcome you to NAU's ninth annual Undergraduate Symposium. The students presenting their ideas, creative endeavors, and research today will fill the Skydome, the du Bois Center, and the Liberal Arts building with the excitement of new discoveries.

The sheer scale of Symposium reflects the NAU community's commitment to research and creative work at the undergraduate level. It also represents our shared dedication to service learning and collaborative projects that connect students with opportunities to make a difference.

Our faculty, who are world-class scholars with a passion for mentorship, create opportunities for exceptional undergraduate learning every day. Their influence, joined with the support of our donors and sponsors, creates an environment where intellectual discipline and joyful curiosity become lifelong habits for our students.

This devotion to student success pays rich dividends. NAU students are not average—they are exceptional. They are motivated self-starters who make the most of every opportunity we can give them, pursuing knowledge about the world around us and communicating their findings in imaginative ways. In doing so, they craft a brighter future for themselves and for all of us.

My hearty congratulations to our students and everyone who contributed to this event.

Sincerely,

A handwritten signature in cursive script that reads "Rita Cheng". The signature is written in dark ink on a light background.

Rita Hartung Cheng

President

# Message from the Vice President for Research

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Dear Students, Faculty Colleagues, and Guests,

Today NAU is celebrating its ninth annual university-wide Undergraduate Symposium, which showcases our undergraduate students' efforts in research, scholarship, and artistic endeavors. Through the enthusiastic efforts of faculty and student collaborations, this Symposium has grown over the years to now fill the Walkup Skydome. I am excited that NAU is highlighting the diversity of our students' scholarship and creative outcomes under one roof, and I applaud their academic and creative achievements.

Thank you for joining me and the NAU and Flagstaff communities in congratulating these students and wishing for their future success.

Sincerely,

A handwritten signature in cursive script that reads "William Grabe".

William Grabe, Ph.D.

Vice President for Research

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**Search for presenters, titles, and abstracts at the event kiosks or online at [nau.edu/symposium](http://nau.edu/symposium)**

### Abbreviations

<b>CAL</b>	<b>College of Arts and Letters</b>
<b>CEFNS</b>	<b>College of Engineering, Forestry, and Natural Sciences</b>
<b>COE</b>	<b>College of Education</b>
<b>HHS</b>	<b>College of Health and Human Services</b>
<b>HONORS</b>	<b>University Honors Program</b>
<b>FCB</b>	<b>The W. A. Franke College of Business</b>
<b>GL</b>	<b>Global Learning</b>
<b>SBS</b>	<b>College of Social and Behavioral Sciences</b>
<b>UC</b>	<b>University College</b>

## College of Arts and Letters: Special Events for the Week of April 19-26



All College of Arts and Letters (CAL) special events for the Undergraduate Symposium listed below are in the Performing/Fine Arts Building (#37) on the NAU campus.

All events are free unless marked "\$admission." Most tickets can be purchased through NAU Central Ticketing or at the door.

### **Sunday, April 24 - Monday, April 25, 2016:**

#### **The Mitzvah Project: Hitler's "Jewish" Soldiers**

- 2:00 PM Sunday, 6:30 PM Monday
- Theatrikos
- \$admission

### **Monday, April 25 - Friday, April 29, 2016:**

#### **Aphasia: Neurological Disease in Text and Image**

- 8:00 PM - 8:00 PM
- Riles (#15), 2nd Floor Lobby

### **Tuesday, April 26 - Saturday, April 30, 2016:**

#### **Mind 2 Machine 2 Material: Digital Technology and**

##### **Sculpture Today**

- 12:00 PM - 5:00 PM
- NAU Art Museum

### **Tuesday, April 26, 2016:**

#### **NAU Jazz Band Concert**

- 7:30 PM
- Ardrey Memorial Auditorium (#37)

### **Thursday, April 28, 2016:**

#### **Une Tempête by Aimé Césaire**

- 6:00 PM - 8:00 PM
- Liberal Arts, 136

### **Thursday, April 28 - Saturday, April 30, 2016:**

#### **To Kill A Mockingbird**

- 7:30 PM - 10:00 PM
- Clifford E. White Theatre (#37)
- \$admission

### **Friday, April 29, 2016:**

#### **BFA Show Opening Reception**

- 5:00 PM - 7:00 PM
- Beasley Gallery

### **Friday, April 29, 2016:**

#### **NAU Percussion Ensemble Concert**

- 7:30 PM
- Ardrey Memorial Auditorium (#37)

### **Saturday, April 30, 2016:**

#### **NAU Wind Chamber Concert**

- 10:00 AM
- Ardrey Memorial Auditorium (#37)

### **Saturday, April 30, 2016:**

#### **NAU Vocal Jazz Concert**

- 7:30 PM
- Ardrey Memorial Auditorium (#37)



## Hooper Poster Presentations & Reception Special Event: By Invitation Only

The Office for Undergraduate Research & Creative Activity celebrates this year's Hooper Undergraduate Research Award recipients, with special guest, Dr. Henry O. Hooper, retired NAU associate provost for academic affairs and physics professor emeritus.

**Thursday, April 28, 2016**

**4:30-6:30 PM**

**Native American Cultural Center, Building 14, Gathering Room**

- Dylan Barbera: Empathy in Motion: Self-Other Dynamics of Moving vs. Static Emotional Stimuli (Mentor: Chad Woodruff)
- Daniel Boggs: Measuring the Recharge Rate of Aquifers in the Flagstaff Area (Mentor: Abraham Springer)
- Brett Cutler: EDS/WDS Quantification of Elemental Spatial Distribution in Fish Scales: Paving the Way for Geochemical Assessment (Mentor: Russell Benford)
- Ra'Shae Esplin: Self-Assembly of Janus Particles under Chemical Propulsion and Magnetic Fields (Mentor: John Gibbs)
- Wolfgang Forbes: Dune Migration Rates on the Navajo Reservation and Possible Links to Climate Change (Mentor: Lee Amoroso)
- Elizabeth Gehret & Curtis Dankof: Numerical Modeling of Star Formation Mechanisms within Interacting Galaxies (Mentor: Lisa Chien)
- Allison Griffin: Assessing Personality Types of Students in Athletic Training Programs (Mentor: Scot Raab)
- Jonathan Grunwald: Uranium's Effect on Estrogen Sensitive Tissues in Early Embryonic Danio Rerio (Mentor: Catherine Propper)
- Rachel Harrow: A Method for Assessing Presence of the Endangered New Mexico Meadow Jumping Mouse (Mentor: Russell Benford)
- Dane Henderson: Using Satellite Remote Sensing to Study the Birth and Fate of a New Volcanic Island (Mentor: R. Greg Vaughan)
- Alexandra Huff: Placing New Constraints on the Unexpectedly Complex Formation of Meteor Crater (Mentor: Justin Hagerty)
- John Kaplan: Potential Viability of Biopesticide for Managing Bark Beetles in Forest Ecosystems (Mentor: Richard Hofstetter)
- Samantha Kruse : Heavy Metal for Migraines: Novel Phosphonium Ligands for Palladium-Based Sandwich Complexes (Mentor: Stephanie Hurst)
- Emily Lawhead: Contemporary Japanese Installation Artists: Five Approaches to Exhibition Space (Mentor: Zsuzsanna Gulacsi)
- Erik Lehmkuhl & Lindsey Stolze: Development of Microsatellite Markers to Assess Paternity and Genetic Population Structure in the Leech *Helobdella modesta* (Hirudinea: Glossiphoniidae) (Mentor: Stephen Shuster)
- Lucas Molina: Litter Analysis of Long-Term Treatments on a Ponderosa Pine Forest: Litter Amounts, Oxygen Isotopes, and Climate Change (Mentor: Matthew Bowker)
- Michael Newell: Exercise Redox Signaling: Intensity Matters (Mentor: Tinna Traustadottir)
- Daniel Raggio: Advancements in Scaling Models for Ejecta Blankets of Lunar Impact Craters (Mentor: Oleg Abramov; James Wittke)
- Bridger Rodoni: Cell Signaling in Response to Acute Exercise: Effects of Aging (Mentor: Tinna Traustadottir)
- Lindsay Sidak-Loftis: Comparison of Ohi'a Tree Genotypes on Old Versus New Lava Soils in Hawai'i (Mentor: Joseph Busch)
- Claire Sotelo & Mikayla Laufer: Understanding the Eruption History of SP Crater, Northern Arizona, Through Tephra Mapping and Cinder Analysis (Mentor: Nancy Riggs)
- Seth Terrell: Testing the Proposed Margin of the Yavapai-Mojave Boundary Zone and Field Guide (Mentor: Ernest Duebendorfer)
- Dylan Thomas: Metabolic Engineering of a Host to Increase Production of a Biofuel, Dimethylsqualene (Mentor: Andy Koppisch)
- Carl Thomson: Testing a New Method for Determining Soil Moisture Infiltration (Mentor: Frances O'Donnell)
- Patrick Warfel: A Comparison between the Chemistry of Cinder Deposits and Volcanoes in the San Francisco Volcanic Field (Mentor: Nancy Riggs)
- Taylor West: Individual Differences in Mindfulness and Quiet Ego Functions as Moderators of a Neural Correlate of Self-Centric Motivation (Mentor: Robert Goodman)
- William Woods: Soil Moisture Retention Comparison in Gradational Burn Severity of the Slide Fire Area: Thinned vs. Unthinned Ponderosa Pine Forests on the Southern Colorado Plateau (Mentor: Abraham Springer)
- Kyle Wyman: Debris Flow Potential in Slide Fire Area (Mentor: Taylor Joyal)

# MORNING SESSION

## Skydome CAL Floor

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9:00 AM - 11:00 AM – Exhibit

**Throwing Pottery - CAL, Art**  
NAU Clay Club

**Who Defines Native Identity? - CAL, English**  
Samantha Austin

**ART 497 Exhibition - HONORS, Honors Program**  
Lauren Kalt, Taryn Schreiner, Oli  
Wheeldon, Olivia Yuen, Sara Bogle

**3D Scanning - CAL, Art**  
Art 151 3D Design Class

## Skydome Honors Table

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9:00 AM - 11:00 AM – EXHIBIT

**Scorched Earth - HONORS, Honors Program**  
Griffin Thompson, Frank Furtado, Katy Waltz

## Skydome Roundtable R1

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11:00 AM - 11:30 AM – ROUNDTABLE DISCUSSION

**Trans-Feminism and Contemporary Media  
Representations of Women - HONORS, Honors  
Program**  
Gia Hoegh, Tatiana Rasic, Danielle  
Dlugajczyk, Colt Solberg, Katie Saline,  
Jenna Chaffeur, Jarrod Chaplin

## Skydome Roundtable R2

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10:00 AM - 10:25 AM – ROUNDTABLE DISCUSSION

**Two-Eye Seeing: Embracing Indigenous and  
Western Knowledge in the Early Childhood  
Curriculum - COE, Educational Specialties**  
Silvia Dominguez Mateo

11:00 AM - 11:30 AM – ROUNDTABLE DISCUSSION

**A Return to the Delta: Perspectives on Human  
Involvement with Colorado River Restoration  
through Creative Representation - HONORS,  
Honors Program**  
Emily Haworth, Elizabeth Nichols,  
Cassandra Leone

## Skydome Roundtable R3

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9:30 AM - 9:55 AM – ROUNDTABLE DISCUSSION

***Teaching Young Minds through the Arts and Cultural Interactions*** - COE, Art

Kacie Hayes

10:30 AM - 11:00 AM – ROUNDTABLE DISCUSSION

***All Families are Beautiful: Celebrating Race, Ethnicity, and Sexual Identity*** - COE, Educational

Specialties  
Kirsten Novelly

## Skydome East Concourse - ADA section

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### Interdisciplinary Writing Project Video-Gaming Exhibition – CAL, English

9:30 AM - 10:30 AM – Exhibit

***How Students in the Interdisciplinary Writing Program Utilized the Rhetorical Situation and Social Media to Reach out to Incoming Freshmen***

Nicole Escamilla Guardiola, Sabrina Leal, Ali Parks

***A Meme Discussion of Pinterest***

Morgan Wentz

***A Meme Discussion of Young Adult Literature Community***

Shaylee Williams

***Playful Interaction on iFunny***

Denise Castaneda

***Pinning Happiness***

Sarah Magee

***A Meme Discussion of the Kardashian Clan***

Gabrielle Hollinger

10:30 AM – 11:30 AM – Exhibit

***The Playful Rhetoric of Lost Pinups***

Victoria Morse

***Designed Interactions of Edgy-White Liberal***

Allison Almanzar

***Gamifying Freshman Composition***

Evanne Gutierrez

***Hacking, Playing, and Reddit***

Joaquin Romero

***Playfully Navigating the Internet***

Bailey Davis

***Building a Better Dungeon: Intended and Perceived Learning***

Edward Gardner

11:30 AM - 12:30 PM – Exhibit

***How the Students behind the University Writing Commons Apply Bitzer to Resource Development, Academics, and Daily Life***  
Justin Kanzler, Nicole Guardiola, Sabrina Leal

***The False Choice: What it Does to the Gamer and the Student***  
Daniel Terry

***Videogames and the Importance of Choice***  
Chase Frank

***Playful Memes***  
Nicholas Deleon

***Women and Media: The Concern on Role Models, Celebrity, and Gossip***  
Josie Griffith

***Instagram and Dogs: A Playful Discussion of App Use***  
Kelsey Tapia

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## Skydome Stage A

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9:10 AM - 9:30 AM – ORAL PRESENTATION  
***The Scream Affect: Looking at Final Girls and Affect Theory*** - SBS, Women's and Gender Studies  
James Scott

9:30 AM - 9:50 AM – ORAL PRESENTATION  
***Intersectionality and Health Disparities: Applying an Intersectional Lens to the Supplemental Nutrition Program for Women, Infants, and Children*** - SBS, Women's and Gender Studies  
Martha Garner

### World Views: The Amazon, Peru, the Middle East, and Finland

10:00 AM - 11:00 AM – Oral Presentation

***Masking Insurrection: Satirical Clothing Descriptions in Eighteenth Century Lima*** - HONORS, Honors Program  
Brittany Erwin

***Reap What Is Sown: Exploitation of the Western Amazon*** - HONORS, Honors Program  
Austin Graham

***Education and Welfare in Finland*** - HONORS, Honors Program  
Kristy Silva

***The Power of the Pen: Women and Education in the Middle East*** - HONORS, Honors Program  
Jenna Shoosmith

## Skydome Stage B

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9:00 AM - 10:00 AM – ORAL PRESENTATION

***The Tao of Animal: Creative Expressions of Academic Ideas*** - HONORS, Honors Program

Jennifer Carlson, Katie Carpenter,  
Austin Dikeman, Kaley Schafer,  
Melissa Sepulveda, Jenna Shoosmith,  
Brianna Sparks, Devon Swanson

10:00 AM - 11:00 AM – ORAL PRESENTATION

***The Craft of Fiction, 1*** - HONORS,  
Honors Program

Desirae Enriquez, Joseph Remy, Jr.,  
Keely Miller, Ben Davis

## Skydome Stage C

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### Transgender Legal and Prison Issues

9:00 AM - 10:00 AM – Oral Presentation

***When a Body Becomes Illegal*** - HONORS,  
Honors Program

Jenna Chaffeur, Amber Treadway,  
Jarrod Chaplin, Mackenzie Staires

***Today's Transgender Prison Issues in Relation to Orange is the New Black*** - HONORS, Honors Program

Annalee Boyle, Cindy Sloan, Celeste Zavala

### Mad Max, Robots, and the Histories of Dystopias

10:00 AM - 11:00 AM – Oral Presentation

***Monopoly: Mad Max Edition*** - HONORS,  
Honors Program

Braden Parker

***A History of Robots in Dystopian Literature and Film*** - HONORS, Honors Program

Kristina Schindele, Victoria Grant, Lauren Leever

## Skydome Stage D

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9:00 AM - 10:00 AM – ORAL PRESENTATION

***Applied Mindfulness and Wellbeing*** - HONORS,  
Honors Program

Willem Blakely, Emeli Filelds,  
Lyrica Jensen-Maldonado,  
Michael Stoy, Alexandra Ware

10:00 AM - 11:00 AM – ORAL PRESENTATION

***Understanding Everyday Compassion*** - HONORS,  
Honors Program

Anthony Atayde, Savannah Hillebrand, Teddy  
Jemmings, Katie Mergen, Edwin Perez

## duBois Fremont Room

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8:55 AM - 9:20 AM – ORAL PRESENTATION

**Wildlife Telemetry Drone** - CEFNS,  
Mechanical Engineering  
Jeffrey Eberle, Lauren Adoram-Kershner,  
Jason Vizcaino, Kellan Rothfus

9:20 AM - 9:45 AM – ORAL PRESENTATION

**WL Gore Calcified Vessel Model** - CEFNS,  
Mechanical Engineering  
Michael Rickerd, Skyler Buchanan,  
Cameron Fisher, Nolan Kirk, Bryce  
Ribucan, Kathryn Shallcross

10:20 AM - 10:45 AM – ORAL PRESENTATION

**Hozhoni Art Program Assistive Easel** - CEFNS,  
Mechanical Engineering  
Jeannette Nelson, Margaret Wisman, Adam  
Barad, Brittnee Barrett, Logan Bacher

10:45 AM - 11:10 AM – ORAL PRESENTATION

**Hozhoni Button Making Team** - CEFNS,  
Mechanical Engineering  
Dylan Oliva, Kristen Rieger, Ryan  
Torres, Bryce Igo, Abdulah Almer

## duBois Marshall Room

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8:55 AM - 9:20 AM – ORAL PRESENTATION

**2016 PCI Big Beam Capstone Project** - CEFNS,  
Civil Engineering, Construction Management,  
and Environmental Engineering  
Michael O'Reilly, Nicholas Jokerst,  
Eman Albdiwiyi, Deena Albustan

9:20 AM - 9:45 AM – ORAL PRESENTATION

**2016 ASCE Steel Bridge** - CEFNS, Civil  
Engineering, Construction Management,  
and Environmental Engineering  
Brian Joufflas, Kaitlin Vandaveer,  
Matthew Rodgers, Logan Couch

9:45 AM - 10:10 AM – ORAL PRESENTATION

**NAU ASCE Concrete Canoe Capstone** - CEFNS,  
Civil Engineering, Construction Management,  
and Environmental Engineering  
Chelsie Kekaula, Colton McConnell, Brent  
Lipar, Emily Melkesian, Evan Kaichi

10:20 AM - 10:45 AM – ORAL PRESENTATION

**Flood Risk to Hillside Mine Tailings  
Cap** - CEFNS, Civil Engineering, Construction  
Management, and Environmental Engineering  
Adel Althawab, Kyle Karshner,  
Christopher Hazel, Steven Sandavol

10:45 AM - 11:10 AM – ORAL PRESENTATION

**Red Cloud Mine Preliminary Assessment and  
Site Inspection** - CEFNS, Civil Engineering,  
Construction Management, and Environmental  
Engineering  
Taylor Oster, Dani Halloran, Kelsey  
Hammond, Haley Michael, Robert Reny

11:10 AM - 11:35 AM – ORAL PRESENTATION

**Saginaw Hill Erosion Control** - CEFNS, Civil  
Engineering, Construction Management, and  
Environmental Engineering  
Brooke Rhodes, Alexander Meisner,  
Tyler Shamburg, Abdullah Alsarraf

## duBois Meadows Room

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8:55 AM - 9:20 AM — ORAL PRESENTATION

**Exponential Perspective Rendering Engine** - CEFNS, Electrical and Computer Engineering  
Emily Bartman, Garrett Steffen, Dakota Jones, Yi Zong

9:20 AM - 9:45 AM — ORAL PRESENTATION

**Automated Terrain Mapping of Mars** - CEFNS, Electrical and Computer Engineering  
Jorge Felix Caudillo, Tsosie Schneider, Sean Baquiro, Matthew Enright

9:45 AM - 10:10 AM — ORAL PRESENTATION

**HelpTile Mobile Application for Tagging Websites** - CEFNS, Electrical and Computer Engineering  
Joshua Frampton, Temitope Alaga, John Dance, Jun Rao

10:20 AM - 10:45 AM — ORAL PRESENTATION

**Developing a Graphical Interface for Genomic Analysis Tasks** - CEFNS, Electrical and Computer Engineering  
Jean-Paul Labadie, Luis Valenzuela, Jordan Marshall, Abdulaziz Alhawas

10:45 AM - 11:10 AM — ORAL PRESENTATION

**Mobile Data Collection** - CEFNS, Electrical and Computer Engineering  
David Nagel, Justin Poehnelt, Jack Burrell, Ahmad Meer

11:10 AM - 11:35 AM — ORAL PRESENTATION

**EvaluRate: Peer Evaluation Software** - CEFNS, Electrical and Computer Engineering  
Dylan Grayson, Conner Swann, Brian Saganey, Brandon Parea

## duBois Southwest Room

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8:55 AM - 9:20 AM — ORAL PRESENTATION

**Preventing Falls: Real-Time Analysis of Abnormal Walking Characteristics** - CEFNS, Electrical and Computer Engineering  
Jay Morita, Robert Kasper, Mohammad Aljoilan

9:20 AM - 9:45 AM — ORAL PRESENTATION

**The Rehabilitative BabyLift** - CEFNS, Electrical and Computer Engineering  
Colm Corr, A Al Omairin, Mustafa Alkhabaz, Y E-Said

9:45 AM - 10:10 AM — ORAL PRESENTATION

**NASA Orion Spectrometer** - CEFNS, Electrical and Computer Engineering  
Noah Zimmerer, Erich Kroneberger, Chris Wieduwilt, Zach Olson, Keifer Dunham

10:20 AM - 10:45 AM — ORAL PRESENTATION

**Smart Energy-Saving RFID Light Switch** - CEFNS, Electrical and Computer Engineering  
Derek McCormick, Scott Peterson, Kaden MacFadyen, Bennett Kool, Christopher Hood

10:45 AM - 11:10 AM — ORAL PRESENTATION

**Bark Beetle Deterrent** - CEFNS, Electrical and Computer Engineering  
Junchi Bin, Wesley Yazzie, Alejandro Rhyne, Abel Perez, Keith Vicente

11:10 AM - 11:35 AM — ORAL PRESENTATION

**NASA ZigZag Particle Beam Imaging System** - CEFNS, Electrical and Computer Engineering  
Jose Mireles, Marissa Bell, Aaron Childers, Adam Clark, Jesse Sunderland, Zackary Remley

## CAL – Art

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***Wild Roots Cabaret & Bar***

Anisha Ami - Display board [49A]

***Interior Design of a Salon for the Gender Neutral Society***

McKenna Cooke - Display board [49C]

***The Orchard: A Holistic PTSD Rehabilitation Center for Veterans***

Jessica Drake - Display board [50A]

***Welfare and Vocational Skills Training Center for Adults with Autism Spectrum Disorder***

Jennifer In - Display board [52D]

***New Ways to Fitness***

Erica McKenna- Display board [51B]

***Designing for Healing: A Holistic Approach to Healing Fibromyalgia and Chronic Fatigue Syndrome through Patient Guided Treatments***

Lauren Richards - Display board [51D]

***An Alternative Way of Living for Adults with Special Needs***

Nichelle Williams - Display board [52B]

## CAL – Comparative Cultural Studies

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***The Esoteric History of Christian Science***

Angel Rangel - Display board [53A]

***A Typology of Hokusai's Thirty-Six Views of Mount Fuji***

Isadora Nizalowski - Display board [53B]

## CAL – History

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***The Tohono O'odham and the Development of the U.S.-Mexico Border***

Philip Rody - Display board [53C]

## CAL – Global Languages & Cultures

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***The Destruction of the Alps***

Rang Ly - Display board [53D]

## CEFNS – Biological Sciences

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***Frog Compensation of Additional Weight through Backpacks***

Cassidy Crews, Alyssa Ortiz - Display board [34D]

***Variation in the Intensity of Infection by Echinostoma metacercaria in Bullfrog Tadpoles from Four Northern Arizona Habitats***

Lauren Badertscher, Tiffany Tran, Tanya Sutton - Display board [33A]

***Microbial Involvement with Colorectal Cancer***

Cherae Bilagody, Monica Yellowhair, Mark Linhart, Sonora Olivas, Emily Kaufman, Heidie Hornstra, Greg Caporaso - Display board [32D]

***Differential Effects of Sperm Limitation on Family Sex Ratios in the Parasitoid Wasp, Nasonia vitripennis***

Laura Blair, Alexandria Sutphin, Jeff Baranowski, Zane Holditch - Display board [32C]

***Local Adaptation in Leeches: Estimating the Relative Fitness of Three Northern Arizona Helobdella modesta Populations in Natal and Non-Natal Water***

James Boothroyd, Cassidy Klovanih, Anneliese Martinez, Rebecca Beresic-Perrins, Stephen Shuster - Display board [32A]

***Genotyping Yersinia pestis from North America Using Amplicon Sequencing***

Heather Centner, Carina Hall, Jason Sahl, Jim Schupp, Paul Keim, David Wagner - Display board [31D]

***Rare Plant Importance to Pollinator Species Richness***

Landon Eldredge - Display board [31B]

***A Method for Assessing Presence of the Endangered New Mexico Meadow Jumping Mouse***

Rachel Harrow, Russell Benford, Valerie Horncastle, Nashelly Meneses, Carol Chambers - Display board [27A]

***Competitive Outcome in Tribolium Spp. Is Determined by Priority***

Zane Holditch - Display board [34B]

***Risk of Arboviral Disease Transmission by Aedes aegypti in Central Arizona***

Madelyn Kane, Russell Benford, Nashelly Meneses - Display board [26C]

***Development of Microsatellite Markers to Assess Paternity and Genetic Population Structure in the Leech Helobdella modesta (Hirudinea: Glossiphoniidae)***

Erik Lehmkuhl, Lindsey Stolze, Kelsey Banister - Display board [26A]

***Effects of Butachlor and Competition on the Development of Fejervarya Vittigera and Rhinella Marina***

Alexander McCain, Molly Shuman-Goodier, Catherine Propper - Display board [26D]

***Selection on Brood Size in the Leech Helobdella modesta***

Isabel Moya Gonzalez, Stephen Shuster, Rebecca Beresic-Perrins - Display board [25D]

***A Preliminary Molecular pPhylogeny of the Genus Stenomorphia (Coleoptera: Tenebrionidae) Shows Rampant Subgeneric Paraphyly***

Priscila Navarrete, Kojun Kanda, Lucio Sanchez, Aaron Smith - Display board [33C]

***The Effects of Alcohol in Macrophage-Pseudomonas Aeruginosa Burkholderia Thailandensis***

Wayne Nez, Victor Jimenez, Fernando Monroy - Display board [28A]

***Arsenic Has No Effect on Estrogen Sensitive Genes in Early Embryonic Danio Rerio***

Karen Olson, Lauren Quinto, Tomoko Wilson, Ella Santana-Propper, Ornella Selmin, Donato Romagnolo, Catherine Propper - Display board [27C]

***Integration of the Scratch Wound Healing Assay and Molecular Techniques to Elucidate the Effects of Arsenic and Estrogen on Wound Healing***

Stephan Ramos, Bronson Pinto, Jonathan Grunwald, Catherine Propper, Robert Kellar - Display board [29A]

***Cell Signaling in Response to Acute Exercise: Effects of Aging***

Bridger Rodoni, Matthew Gage, Tinna Traustadottir - Display board [32B]

***Bees, Flowers, and Rising Global Temperatures***

Joshua Sally, Brandon Clark, Stephanie Lowe - Display board [28C]

***A Preliminary Phylogeny for the Pimeliine (Coleoptera: Tenebrionidae): A Pega-Diverse Desert Radiation***

Lucio Sanchez, Kojun Kanda, Priscila Navarrete, Aaron Smith - Display board [33B]

***Goat Antibody Response to Burkholderia Pseudomallei Percutaneous Infection: Evaluation of Serodiagnostic Assays***

Courtney Seavey, M. Keener, A. Shannon, J. Yi, R. Bowen, M.F. Simpanya, C. Allender - Display board [30A]

***Pollinator Community Transitions Correlated Canopy Cover on Elevation Gradients***

Jeremy Scuderi - Display board [28B]

***Evaluation of the Antibody Response to Burkholderia pseudomallei in a 13-Year Chronic Carriage Infection***

Austin Shannon, Jinhee Yi, Lauren Pristo, Karen Hernandez, Talima Pearson, Erin Price, Mark Mayo - Display board [30D]

***Comparison of Ohia Tree Genotypes on Old Versus New Lava Soils in Hawaii***

Lindsay Sidak-Loftis, Liam Mueller, Christian Giardina, Joseph K. Bailey, Jennifer Schweitzer, Nathan E. Stone, Joseph D. Busch - Display board [29D]

***Diversity of Tick-Borne Pathogens in Marin and Monterey Counties***

Julie Wachara, Tanner Porter, Kylie Sage, Nathan Nieto - Display board [30C]

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## CEFNS – Chemistry and Biochemistry

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***Effect of Decyl Rhamnoside on Bacterial Biofilms***

Stephanie Arellano, Cody Crozier, Chett J. Boxley, Andrew T. Koppisch, Mackenzie Harrison - Display board [22B]

***Heteroatom Polyaromatic Hydrocarbon Systems with Nitrogen Ligands: Reinventing the Sandwich***

William Cross Lopez, Thomas Haden, Julian Herring, Samantha Kruse, Stephanie Hurst - Display board [23B]

***Uranium and Arsenic in Soil and Sediment from Cameron, Arizona***

Brooke Dalton, Tommy Rock, Jani Ingram – Display board [23A]

***Analyzing the Water Supply: Detecting Arsenic Concentrations in Unregulated Wells on the Navajo/Hopi Reservation***

Brandon Garcia, Jonathon Credo, Jani Ingram, Tommy Rock - Display board [22A]

***Large and Affected by Charge: Synthesis and Analysis of a Series of Binaphthoquinone (BNQ) Compounds***

Julian Herring, Will Cross, Samantha Kruse, Thomas Haden, Stephanie Hurst - Display board [22C]

***Heavy Metal for Migraines: Novel Phosphonium Ligands for Palladium-Based Sandwich Complexes***

Samantha Kruse, Julian Herring, William Cross-Lopez - Display board [24B]

***Arsenic Speciation Method Development for Characterization of Unregulated Water Samples***

Shannon Lamy, Alanna Koritzke - Display board [24A]

***Elemental Characterization of Unregulated Wells on the Navajo and Hopi Reservations***

Mackenzie Simmonds - Display board [23C]

***The Influence of Exporter Proteins on Ionic Liquid Tolerance of E. coli***

Lucas Simmons, Zachary Pearson, Kahla Merrett, Joseph Aklinski, Dylan Thomas, David Fox, Rico Del Sesto - Display board [25A]

***Metabolic Engineering of a Host to Increase Production of a Biofuel, Dimethylsqualene***

Dylan Thomas, Andrew Koppisch, Rico Del Sesto, Blaine Pfeifer - Display board [24D]

## CEFNS – Civil Engineering, Construction Management, and Environmental Engineering

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### ***Museum of Northern Arizona Meadow Riparian Habitat Enhancement Project***

Noor Alsadi, Matthew Sorenson, Jasem  
Alrumaidheen, Khaled Alazmi - Display board [7D]

### ***Use of Photogrammetry to Measure the Condition of Existing Structures***

Sabrina Ballard - Display board [8A]

### ***Cinder Lake Alternative Landfill Liner Design***

Jessika Gloor, Steven Hoff, Lamyaa Alrumaidhin,  
Patrick Bridgman - Display board [8B]

### ***RV Wastewater Treatment***

Ryan Marshall, Chris Young, Chris Yazzie,  
My Hoang - Display board [7B]

## CEFNS – Electrical and Computer Engineering

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### ***Together - A Lightweight Group Organization Tool***

Ryan Batchelder, Eric Huff, Christopher Marcus,  
Jonathon Todd - Display board [7A]

### ***Measuring Accentedness***

Erik Dixon, Cameron Gaskin, Austin Abhari,  
Harrison Lambeth - Display board [5A]

### ***Simple Language Learning on a Single-Point Vibrotactile Interface***

David Miller - Display board [6B]

### ***Gigapixel Image Rendering***

Matthew Ostovarpour, Daniel Garcia-Briseno, Douglas  
Peterson, Thomas O'Brien - Display board [5D]

### ***Holocaust Exhibit: Through the Eyes of Youth***

Luke Sanchez, Herbie Duah, Michael Ortega,  
John Loudon - Display board [4C]

### ***YAX: Taxonomic Assignment Using Metagenomic Shotgun Sequences***

Hayden Westbrook, Evan Bolyen, Mike Deberg,  
Andrew Hodel - Display board [4D]

### ***A One-at-a-Time Sensitivity Analysis on the Winding Filament Hypothesis (WFH) Model***

Christopher Whitney, Uzma Tahir, Jeremy Petak,  
Kiisa Nishikawa, John Georgas - Display board [6D]

## CEFNS – Environmental Sciences and Environmental Studies

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### ***The Comparison of Aquifer Recharge Rates in the Flagstaff Area***

Daniel Boggs - Display board [21B]

### ***The Real Food Challenge at Northern Arizona University***

Camile Diab, James Etzkorn, Emma Collins,  
Dylan Lenzen - Display board [18C]

### ***Communicating Forest Restoration***

Brandon Hollingshead, Jacob Dottle,  
Mark Kolwyck - Display board [21D]

### ***Addressing Climate Change Principles for Local Youth Empowerment: Uplift Climate Conference***

Jayne Jancys, Taryn Schreiner, Mariah  
Ashley - Display board [18A]

### ***Sustainable Citizens Program Consulting Project***

Zachary Kerutis, Janice Hakala, Allyson  
Kenna - Display board [19C]

### ***Measuring Soil NOx Emissions from Biofuel Crops and Analyzing Their Effect on Plant Photosynthetic Activity***

Michele Lozano - Display board [17D]

**Flagstaff EcoRanch: Funding Local Action for Sustainable Solutions**

Jordan Pynes, Andrew DePaoli, Addison Guevara, Eleanor Krueger - Display board [19A]

**Produce Production and Community Development through the Flagstaff EcoRanch**

Gregory Samaniego-Morris, Kelsey Morris, Kaeli Frechette, Madison Corey - Display board [20D]

**Sustainable Citizen Program**

Victoria Seelig, Justice Walker, Matt Stream – Display board [20C]

**Reuse Shop and Sustainability Survey**

Jessica Thomas, Stella Carr, Kurtis Strauss - Display board [20B]

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## CEFNS – Forestry

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**Can Acoustic Vibrations Affect the Growth of Fungi?**

Brennan Copp, Peter Herron - Display board [17A]

**Jumping into Jumping Mouse Genomics: Determining Diet of an Endangered Species**

Austin Dikeman, Daniel Sanchez, Viacheslav Fofanov, Faith Walker, Colin Sobek, Carol Chambers - Display board [16D]

**Litter Analysis of Long-Term Treatments on a Ponderosa Pine Forest: Litter Amounts, Oxygen Isotopes, and Climate Change**

Lucas Molina - Display board [17C]

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## CEFNS – Geology

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**Analysis of Geomorphic Features and Inter-Crater Basin Strata of Hadriacus Cavi, Mars, through Large-Scale Geologic Mapping and Section Correlation**

Michelle Barton - Display board [12D]

**Zircon Geochemistry of Bentonites within the Late Cretaceous Kaiparowits Formation in Southern Utah, USA**

Heather Casares - Display board [12C]

**Dune Migration on the Navajo Reservation and Possible Links to Climate Change**

Wolfgang Forbes - Display board [13D]

**The Evolution of the Cordilleran Arc and the Application of Zircon Geochronology**

Scott Hensel - Display board [13B]

**Investigation of SP Crater, Northern Arizona, Eruption History through Mineralogical Analysis**

Mikayla Laufer - Display board [14D]

**Advancements in Scaling Models for Ejecta Blankets of Lunar Impact Craters**

Daniel Raggio, Michael Bland, Oleg Abramov, David Kring, Ankush Kumar, James Wittke - Display board [14B]

**Testing the Proposed Margin of the Yavapai-Mojave Boundary Zone and Field Guide**

Seth Terrell - Display board [15D]

**Ah poop! Estimating Real-Time Fecal Bacteria Concentrations with Turbidity in Oak Creek, Arizona.**

Savannah Tjaden - Display board [15B]

**Soil Moisture Retention Comparison in Gradational Burn Severity of the Slide Fire Area: Thinned vs. Unthinned Ponderosa Pine Forests on the Southern Colorado Plateau**

William Woods - Display board [16B]

## CEFNS – Mathematics and Statistics

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### ***Nim-Values of Simplified Sylver Coinage***

Joni Hazelman, Parker Montfort, Robert Voinescu, Ryan Wood - Display board [12B]

## CEFNS – Mechanical Engineering

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### ***A Solid Polymer Electrolyte for Multifunctional Material Development***

Willy Andrews - Display board [1C]

### ***Effects of Electrode Morphology on Power Structural Composites***

Andrew Liebig, Constantin Ciocanel - Display board [3C]

### ***Department of Energy Collegiate Wind Competition, Mechanical Design***

James Melton, Randon Allen, Tyler Richards, Nathan Cenicerros, Jessica Bauer, Jeremy Cook - Display board [1B]

### ***Telecomm Wind Turbine Design and Deployment***

Michael Wertz, Ryan Schatz, Norman Clark, Brock Pellerin, Anas Alkandari, Hashim Alramadhan - Display board [1D]

### ***NAU Collegiate Wind Competition 2016 Tunnel Team B***

Brayden Worrell, Brayden Worrell, Zachary Sabol, Korey Hoolaas, Jess Robinson, Michael Evans, Scott Muenta - Display board [2A]

## CEFNS – Physics and Astronomy

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### ***Star Formation in the Interacting Galaxy Pair: Arp256***

Connor Auge, Cody Stein - Display board [9D]

### ***Confirming Disk Presence and Determining Temperature for Young Multiple Star System TWA 3***

Ian Avilez - Display board [9C]

### ***Self-Assembly of Janus Particles under Chemical Propulsion and Magnetic Fields***

Ra'Shae Esplin - Display board [9B]

### ***Finding Fireballs: The Lowell Observatory Cameras for All-Sky Meteor Survey***

Connor Hall - Display board [10D]

### ***10m Main Belt Asteroid Population Estimation Using Cratering Density from Vesta Imagery***

Michael Rynders - Display board [10B]

### ***Characterization of Layered Ejecta Blankets in the Southern Hemisphere of Mars***

Nathan White - Display board [11C]

## CEFNS – Center for Science Teaching and Learning

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### ***Inquiry Based Learning in Mathematics Classrooms***

Stephanie Carver - Display board [8D]

## COE – Educational Leadership

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### ***Ways to Communicate with Everyone***

Chad Daigle - Display board [47A]

## COE – Educational Psychology

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### ***A Space to Escape in the College of Education***

Jordyn Keil, Savanna Kessler - Display board [47C]

## COE – Educational Specialties

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### ***The Cultural Implications of Reclaimed Water on Snowbowl***

Laura Bell, Sarah Thiel - Display board [48A]

### ***Lessons for School Reform in the United States: Looking at South Korea and Finland***

Chloe Flitton, Jessie Rodriguez - Display board [48C]

### ***The Presence of Bilingual Programs***

Vincent Jong - Display board [45A]

### ***Addressing School Shootings in the Classroom, Integrating Culturally Responsive Teaching to Create a Culture of Caring***

Jennifer Seal, Justine Adams,  
Christian Banks - Display board [46A]

### ***The Importance of Person-First Language in the Classroom***

Cheyenne Wilson - Display board [46C]

## COE – Teaching and Learning

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### ***Overconsumption in Hawai'i***

Allison Rudow - Display board [45D]

### ***Where We're From***

Vanessa Velasco - Display board [44B]

## HHS – Dental Hygiene

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### ***Oral Health Curriculum for Primary Care Providers***

Alexandra Rohlk, Caitlyn Owan, Jessica Vicari,  
Carly Goodin - Display board [109A]

### ***Which Type of Sealant is Best? Resin vs. Glass Ionomer***

Samantha Borny, Rachel Otero, Kaitlin Ringueberg - Display board [109B]

### ***Treatment of Very Young Children by Oral Health Care Providers***

Nicole Chatelain, Haleigh Thomas, Brandi Badilla,  
Majed Aljarallah - Display board [109C]

### ***Oral Health Status and Knowledge among WIC Mothers in Flagstaff, Arizona***

Melinda March, Lizabeth Benitez, Rachel Kortsen, Veronica Vidal - Display board [109D]

### ***Students' Knowledge and Behavior Related to Sugary and Acidic Beverages and Oral Health***

Alicia Martinez, Damariz Perez, Britlyn Gloria - Display board [110A]

### ***Compliance with Oral Care Referrals: Older Adults in a Rural Northern Arizona Community***

Lindsay Montgomery, Sierra Smith, Fahad Alzahrani,  
Ernesto Sanchez - Display board [110B]

### ***An Educational Intervention on the Oral-Systemic Health Connection for Nurse Practitioners***

Jobelle Musni, Marcario Betoney, Hanan Alghamdi - Display board [110C]

## HHS – Health Sciences

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### ***Child And Maternal Health within the Flagstaff Community***

Shana Aiken, Tishena Nez, Amber Howard, Ilana Henderson - Display board [111A]

### ***Physical Activity at Summit High School***

Hugo Arzola, Laural Sheesley, Jocelyn Vasconez, Taylor Weiss - Display board [110D]

### ***Summit High School After-School Program***

Leandra Becenti, Erica Zuniga - Display board [111B]

### ***Would You Like a Cup of Tea?***

Quincy Budell, Kirsi Griner, Jessica Whitney, Jazmine Palmas - Display board [111C]

### ***What Parents Need to Know about Oral Health and Disease Prevention***

Shelby Bute, Emily Baldwin, Kelly Chappell, Emily Favour - Display board [111D]

### ***Flagstaff High School FitKids***

Sherry Chase, Katrina Cuevas, Melanie Edmonds, Maegan Wong, Marissa Opatz - Display board [112A]

### ***Physiological Profiles & Sport Specific Training of Boxers***

James Cox, Jason Dorsch - Display board [112B]

### ***Consequences of Concussion in Sport***

Mary Good - Display board [112C]

### ***Hypertension Reduction and Cognition Improvement in a Senior Assisted Living Community Using Wii Fit***

Angeleeta Greyeyes, Hannah Peterson, Michelle Samson - Display board [112D]

### ***Healthy U at Thomas Elementary***

AJ Howell, Heather Moore, Jessica Harris, Christina Avila - Display board [113A]

### ***Nanise' béé íiná - Plants Are Life***

Tisimpsha Kee, Priscilla Sanderson - Display board [113B]

### ***Alcohol Awareness at Summit High School***

Maura Kelly, Natalie Cravens, Kelly Ingram – Display board [113C]

### ***Managing Stress with College Triathletes***

Haleigh Lovell, Alexis McKinley, Shannon O'Neill, Chelsea Hill, Tammara Shaw - Display board [113D]

### ***CPR and Heart Health***

Nicholas May, Nick May, Derek Young, Aspin Huntley - Display board [114A]

### ***Unleashing Memories through the Harnessing of Music***

Kassidy McAfee, Alyssa Trinidad, Katie Reed, Kelsey Adams - Display board [114B]

### ***Moccasin Story: The Birds and The Bees***

Alexis McKinley, Priscilla Sanderson - Display board [114C]

### ***Iconicity on Educational Maps for People with Cognitive Disorders***

Desiree Meredith - Display board [114D]

### ***Nissan Subaru Dealership Wellness & Nutrition Intervention***

Elise Miller, Cheyenne Franklin, Alexandra Padilla, Jonathan Van En - Display board [115A]

### ***Biggest User Case Study Measuring Changes in the 5 Components of Fitness***

Robert Norton - Display board [115B]

### ***Food Preparation Policies Result in Healthier Lunch Sides in Public Elementary School Cafeterias***

Hannah Peterson, Angeleeta Greyeyes, Tim Behrens, Mina Liebert, Jay Sutcliffe, Aubrey Day, Jennifer Howard Smith - Display board [115C]

### ***Chronic Traumatic Encephalopathy***

Lauryn Rasimas - Display board [115D]

### ***Nutrition for Education***

Jovani Rodriguez, Charlene Slaughter - Display board [116A]

### ***Effects of Muscle Energy Technique on Low Back Pain***

Taylor Sackett - Display board [116B]

### ***Community Chronic Disease Prevention***

Julia Scheid, Alyssa Trinidad, Elise Miller - Display board [116C]

**Enhanced Physical Education and Health Risk Management Program at Summit High School**

Madeline Stanley, Carla Marasigan -  
Display board [116D]

**Eating for Life: The Effects of Diet on Overall Health**

Ariana Tyler - Display board [117A]

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## HHS – Nursing

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**Gestational Diabetes**

Jalyn Schollmeyer, Laura Pauli, Sara Darley - Display board [117B]

**Cooling Caps in Reducing Chemotherapy Induced Alopecia**

Autumn Baechler - Display board [117C]

**The Effects of Hourly Rounds on Patient Safety**

Jessica Balavitch, Matt Page - Display board [117D]

**Type II Diabetes Mellitus: Language Barriers and Management**

Sean Paul Begay, Johnelle Hoskie -  
Display board [118A]

**Making Bedside Report the Standard in Critical Care Units at Summit Healthcare Regional Medical Center**

Ashley Bertilson, Brenna Kelly, Allison Gray - Display board [118B]

**Alcohol Withdrawal Syndrome and Treatment**

Taylor Brown - Display board [118C]

**Nurse Driven Sepsis Protocol**

Allison Chiakmakis, Ashley Rabine -  
Display board [118D]

**How Does Distraction Compared to No Distraction Affect Pain Perception during Painful Procedures in Pediatric Patients**

Alejandro Gonzalez - Display board [119A]

**Nosocomial Infection Spread in Pediatrics**

Ellen Hoogerwerf, Lauren Bricker -  
Display board [119B]

**Bedside Report and Effect on Patient Safety and Satisfaction**

Lindsey Koeppel, Jordan Buchhagen, Kelsie Howden - Display board [119C]

**Replacing Peripheral Intravenous Catheters in Adult Medical Surgical Patients and the Incidents of Phlebitis**

Isabel Nazario, Joshua Gonzalez -  
Display board [119D]

**The Effect of Skin-to-Skin Contact on Breastfeeding Duration**

Taylor Payne - Display board [120A]

**Global Health: Cervical Cancer**

Lisa Weishaar, Christine Gonzales,  
Nicole Todd - Display board [120B]

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## HHS – Physical Therapy and Athletic Training

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**Scapular Dyskinesia**

Courtney Creel - Display board [120C]

**The Implementation of Strength and Conditioning Exercises to Aid in Decreasing the Incidence of ACL Injuries in Women's Soccer**

Kayleann Goettel - Display board [120D]

**Assessing Personality Types of Students in Athletic Training Programs**

Allison Griffin - Display board [121A]

**Physiological Responses to Thermal Stress**

Moriah Larsen - Display board [121B]

**The Effects of Cryotherapy on Acute Injuries**

Kristin Todd - Display board [121C]

**Flat Foot Deformity: A Case Study**

Catlyn Wilson - Display board [121D]

## Honors – Honors Program

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### ***Psychological Issues within the Transgender Community throughout the Changing Process***

Kailah Esona, Anne Gatlin - Display board [105C]

### ***Transgender Television***

Kristina Khan, Haley Yarrington - Display board [104C]

### ***Transgender and Intersex Athletes and Their Impact on Professional Sports***

Anna Ross, Maria Granroth - Display board [106C]

## SBS – Anthropology

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### ***The Effects of Decolonization in the United States***

Caity Bishop - Display board [56A]

### ***Living in the Ancient Andean Desert: Nasca Diet and Migration at La Marcha***

Patricia Aguiniga, Alexis Volta - Display board [56C]

### ***The Archaeological Reconstruction of Caste in Southern Indian Villages***

Gregory Allen - Display board [56D]

### ***Life after Death: Cultural Perspectives on the Afterlife***

Anna Almodovar - Display board [55A]

### ***Archaeology of Weapons and Warfare***

Adrian Banuelos - Display board [55B]

### ***The Archaeology of Music in North America***

Baylee Beeman - Display board [55C]

### ***Pathways of Animal Domestication***

Patrick Bourke - Display board [55D]

### ***The Growth of Trade Leading to the Silk Road***

Steven Bowerman - Display board [54A]

### ***Prehistory of the Domestication of Plants***

Kayla Brown - Display board [54B]

### ***Prehistory of Art within Europe***

Ian Connair - Display board [54C]

### ***The Prehistory of Religion and Spirituality***

Jessi Deibel - Display board [54D]

### ***Black Mesa Analysis***

Celine Doyle - Display board [57B]

### ***An Analysis of Black Mesa***

Siobhan Doyle - Display board [57A]

### ***The Archeology of Weaponry***

Tyler Einck - Display board [56B]

### ***The Significance of a Seed***

Kira Farmer - Display board [67A]

### ***Theological Beginnings***

Megan Felix - Display board [57C]

### ***The Prehistory of the Domestication of Animals***

Jalyn Gagnon - Display board [57D]

### ***The Prehistory of Death and the Afterlife***

Kaitlyn Geck - Display board [58A]

### ***Ancient Polynesian Hydrotechnology***

Kamanukea Gomes - Display board [66C]

### ***Religion/Spirituality across Prehistory in Catalhoyuk***

Mark Gomez - Display board [58B]

### ***Archaeology of Weapons and Warfare in the Middle East (10,000 BCE - 1000 CE)***

Matthew Gross - Display board [58C]

### ***Archeology of Written Systems***

Lupita Gutierrez - Display board [58D]

### ***The Prehistory of Art in Europe***

Hadley Harris - Display board [59A]

### ***Te Mata Ki Te Rangi (Eyes toward the Heavens) - Toponyms of Easter Island***

Kaitlyn Jebens, Madison Ledesma, Amanda Warda, Sara Sanford, Hannah Roberts, Alexander Ballesteros - Display board [59B]

### ***Yezidism and Genocide***

Dean Kaufman - Display board [59C]

***What Will Remain? The Ethnoarchaeological Investigations into the Tiwi of Northern Australia: A Hunter-Gatherer Island Society***  
Ehren Keltz - Display board [59D]

***Austrian Refugee Integration Project***  
Kiril Kirkov, Amy Foust - Display board [60A]

***Reclaimed Water on the Arizona Snowbowl: Cultural and Economic Impacts***  
Maisie Kulpinski, Jack Cavness, Sydnee Wickstrom - Display board [60B]

***Prehistory of Death and the Afterlife in the Middle East and Northern Africa***  
Megan Laurich - Display board [60C]

***Weapons and Warfare***  
Jackson Lee - Display board [60D]

***Food and Nutrition***  
Parker Lewin - Display board [66D]

***The Pre-History of Food and Nutrition in South America***  
Anessa Longoria - Display board [61A]

***The Material Correlates and Archaeological Correlates of the Inupiat Society of North Alaska***  
Rayla Maier - Display board [61B]

***The Evolution of Human Diet***  
Anika Shanelle Martin - Display board [61C]

***The Ju/'hoansi of South Africa: The Material Culture and Archaeological Correlates of a Hunting and Gathering Society***  
Roger Martinez - Display board [61D]

***Applying Anthropology in Development of a Volunteer Outreach Program: The Food Recovery Network***  
Genevieve Mielke, Kira Farmer, Alisha Stalley, Allison Trottier, Victoria Izzo - Display board [62A]

***Decolonizing the Indigenous Mind***  
Rashaun Nez, Emily Hunt - Display board [67B]

***"It's Just a Preference!" The Issue of Colorism in our World***  
Chidiebube Okafor - Display board [62B]

***Reclaimed Water on the Arizona Snowbowl: Environmental Impacts***  
Miriam Phalan, Emily Stevens, Amy Roy - Display board [62C]

***Archeology of Weapons and Warfare***  
Thomas Phillips - Display board [66B]

***Mayan Writing System***  
Elizabeth Santana - Display board [62D]

***Exploring World Culture through the Journey of People***  
Reyna Santiago, Ashley Alvarado - Display board [63A]

***The Mbuti Pygmies of the Ituri Forest: Material Culture and the Archaeological Record***  
Sierra Serna - Display board [63B]

***The Archaeology of Weapons and Warfare during the Upper Paleolithic***  
Julian Shak - Display board [63C]

***Expanding the American Legion's Public Connection***  
Kristin Shannon - Display board [63D]

***Neolithic Chinese Religious Artifacts***  
DaCelia Stephens - Display board [64A]

***Nomadic to Civilization: The Effects on Human Nutrition***  
Joseph Swope - Display board [64B]

***UTV62: Connecting the NAU Community through Student Broadcasting***  
Rebecca Theiss - Display board [64C]

***The Chumash of Southern California: The Archaeological Correlates of a Hunter-Gatherer Society***  
Brittany Trapp - Display board [64D]

***Prehistory of Food and Nutrition: Hunter Gatherer Society vs. Agricultural Society***  
Oswin Verdy - Display board [65A]

***Anthropology: The Prehistory of Food/Nutrition***  
Annette Vieyra - Display board [65B]

***The Prehistory of Art***

Rebecca Welter - Display board [65C]

***Huron, Farmers of the North***

Sydnee Wickstrom - Display board [65D]

***Domestication of Animals***

Michael Wilson - Display board [66A]

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**SBS – Applied Indigenous Studies**

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***Into the Looking Glass to Better Understand Indigenous Methodology***

Breann Clarkson - Display board [67C]

***Gaming and the Seminole Tribe of Florida***

Sophie Diehl - Display board [67D]

***Alcoholism in Reservations***

Kyle Gipe - Display board [68A]

***Business Capitalization on Indigenous Land***

Duane Higdon - Display board [68B]

***Central Arizona Project/Indigenous Research***

Cody Johnson - Display board [68C]

***Racism against American Indians***

Lamia Jumah - Display board [68D]

***Systems of Governance through Time on the Hopi Reservation***

Erica Kallestewa - Display board [69B]

***Alcohol Epidemic of the American Indian***

Tracey Lee - Display board [69A]

***Federal-Public Land: Collaborative Management to Protect Sacred Sites***

Shine Salt - Display board [69C]

***The Makah Tribe & Whaling***

Kyle Thompson - Display board [69D]

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**SBS – Communication**

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***Creating Spaces: Weaving Dwelling and Acknowledgment into the American ESL Classroom***

Kyle Backer - Display board [87A]

***The Power of Words: Mindful Verbal Communication***

Shara Campbell - Display board [87B]

***What it Means to Live Happily Ever After***

Hannah Couch - Display board [87C]

***More than Addiction***

Kaitlin Foley - Display board [87D]

***Ecoflow App for the iWatch***

Rachel Garcia - Display board [86A]

***The Cost of Time Travel***

Teresa Heritage - Display board [86B]

***Risky Gymnasts - The Harm Competitive Gymnastics Can Cause to Developing Bodies***

Rachel Maslyk, Tani Rose Kageyama - Display board [86C]

***The Meaning of Life***

James Ricuito - Display board [86D]

***Technology and Communication Concerning Individuals Living with Invisible Chronic Illnesses***

Cassandra Rosier - Display board [85A]

***Rhetorical Solutions to the Problem of Xenophobia***

Taric Williams - Display board [85B]

## SBS – Criminology and Criminal Justice

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### ***Alcohol, Aggression, and Self-Control, Do You Have What it Takes?***

Montana Edgar, Hunter Davisson, Severiano Hernandez, Graham Langley - Display board [103B]

### ***Lawful Firearm Carry at NAU***

Dillon Harris, Holly Fash, Ryan Kittredge, Kolton Leasure, McKenzie Durtschi - Display board [103C]

### ***The Media's Influence on Police Perceptions***

Conor Hill, Austin Mason-Burrows, LaTisha Gilmore, Diera Mickens - Display board [103D]

### ***One Crime Two Crime Blue Crime True Crime:***

#### ***The Breakdown of Campus Blue Lights***

Marcella Manzo, Samantha Capatosto, Jaclyn Somborovich, Cassandra Gibbs - Display board [102A]

### ***Measuring Academic Success and Drug Use amongst College Students***

Parker Munsch, Nathaniel Phillips, Karli Crocker, Marissa Gallagher - Display board [102B]

### ***Stimulants and Their Relation to Academic Success***

Jared Nicol, Jake Nelson, Jennifer David, Brooke Fulco, Bryson White - Display board [102C]

### ***To Pimp A Butterfly***

Siearra Padilla, Karli Leal, McKenzie Durtschi, Emma Hallet - Display board [103A]

### ***The Hood as an Environment of Rap***

Edgar Perez, Cassidy Hartman, Anthony Rochin, Jamie McNair - Display board [102D]

### ***Trustworthy or Treacherous: How We View the Police and Why***

Dyanna Sanchez, Christian Andrea, Kaitlyn Hasgood, Ashton Virs, James Huck - Display board [101A]

### ***Rap and Drugs***

Matthew Spitzley, Antonietta Bartley, Ricardo Gamlzar, Matt O'Dwyer - Display board [101B]

### ***Police Perception in the Media***

Taylor Trujillo, Vanessa Billegas, Estevan Hoffman, Jackii Padilla - Display board [101C]

### ***Students and Study Drugs***

Dominique Velde, Bridgette Floyd, Nalleli Perez, Brooke Anderson - Display board [101D]

### ***Whatever It Takes***

Lauren Whisler, Daniel Lawrence, Richard Avery, Samantha Lewis, Sean Shoemaker - Display board [100A]

## SBS – Ethnic Studies

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### ***Politicizing Hip Hop***

Candace Colbert, Students of Ethnic Studies 471 - Display board [97A]

### ***SBS - Ethnic Studies***

The GENIUS of Hip Hop  
Courtney Colby, Katherine Thomas, Eric Baskovich, Michael Lyles - Display board [97B]

## SBS – Institute for Human Development

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### ***Linguistic Complexity in Spanish/English***

#### ***Dual-Language Children's Books***

Sandy Nguyen - Display board [92C]

## SBS – Politics and International Affairs

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### ***Interpreting and Enhancing Mental Health and Mental Health Services for Native Americans***

Jessica Chamberlain - Display board [92A]

### ***The Process of Tribal Recognition***

Yvonne Hasgood - Display board [89C]

***The Constitution of the Democratic Republic of Pacifica***

Vanessa Pomeroy, Maddison Powers, Caroline Schillinger, Monica Overturf, Christina Meehan-Vernon - Display board [89A]

***Navajo Water Titles: The Last Frontier***

Dustin Wenger - Display board [90C]

***Western Impact on the Makah Tribe***

Katie Wimbrough - Display board [90A]

**SBS – Psychological Sciences**

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***How Much Skin Does She Have to Show?***

Anet Abbott, Meghan Garcia, Megan Harrison, Sahar Shakoori - Display board [71B]

***Social Pressure and Short-Term Task Perseverance***

Gesselle Arevalo, Kayla South/ Beck, Devin Cooper, Conner McCain - Display board [71C]

***Happiness in Relation to Maslow's Hierarchy of Needs***

Niku Asgari, Logan Barfoot, Brittany Miles, Vincenzo Cullotta - Display board [71D]

***Emerging Adult and Anxiety***

Austin Baker, Sarah Trunzo, Nancy Fossgreen - Display board [72A]

***The Effect of State and Trait Anxiety on Performance***

Amorette Becerra, Carter Bryce, Mariah Block, Joran Lehman - Display board [72B]

***Support Given and Received Based on Gender for Those Coming Out***

Megan Braganza, Katelyn Mikel, Emily Janssen, Daisy Romero, Destinie Gee - Display board [73A]

***Creativity Levels and Their Association with GPA***

Berenice Carballo, Mackenzie Bryson, Kandis Beyer - Display board [73B]

***Exercise and Reading Comprehension***

Nicholas Clayton, Courtney Hofacre, Jordynne Black - Display board [73C]

***A False Perception with a Laugh***

Scott Clor - Display board [80D]

***Bullying and Friendships***

Ashton Dalsing, Cassandra Mort, Rodrigo Bello - Display board [73D]

***And the Final Rose Goes to ... Who is YOUR Ideal Mate?***

Madelin DeVar, Healey Marsch, Keragan Cavolo, Lauren Helbling - Display board [75A]

***Gender and Moral Decision Making***

Autumn Gura, Sloane Olbricht, Ashleigh Holst, Kyle Caley, Thorin Fash - Display board [75B]

***The Impact of Social Media Use on Romantic Relationships***

Chloe Johnson, Adriana Vosskuhler, Nora Dunbar - Display board [75C]

***#WhatsUpWithMyBoo?***

Taelor Keyonnie, Emma Wilford, Amelia Videan - Display board [75D]

***The Effects of Musical Tempo on Working Memory***

Krystal Koehler, Krystal Koehler, Anastasia White, Coretta Nolan, Thomas Linskey - Display board [76A]

***Women are Going to Eat, Men are Going to Have Sex***

Jake Llata, Ashleigh Dalton, Rien Milburn, Daniel Reza - Display board [76B]

***The Bystander Effect among College Students***

Taryn Lovett, Mikayla Poling, Rylee Northcott - Display board [76C]

***Caffeine and Affect State***

Anika Lyon, Courtney Lanzi, Marc Lizcano, Kelsey Kaba - Display board [76D]

***On-Campus Organizations and the Relationship They Have with Life Satisfaction with College Students***

Stefany Malatesta, Alex Targos, Bethany Warter, Thuy Tran - Display board [78A]

***Time Spent on Social Media and Its Relation to Academic Performance***

Gabrielle Marson, Luis Castro, Aaron Hancock, Devyn McLees - Display board [72D]

***How Friendships Influence Behavior in Adolescence***

Kayla Martin, Perla Palomares, Madison Bohan - Display board [78B]

***Fornicate or Evacuate***

Hayes Massahos, Tyler Phillips - Display board [72C]

***Correlation between Academic Stress and Depressive Symptoms in Undergraduate Students***

Margaret Miele, Paige Wiley - Display board [78C]

***Pet Ownership in Relation to Stress Levels in College Students***

Sean Moss, Bryan Stephens, Mariah Miller - Display board [78D]

***Did Your Parents Set You up for Academic Success***

Michael Peters, Anna Sloan, Patrick Lambert - Display board [79A]

***Perceptions of Disabilities***

Jordan Rivera, Kelsey Snyder, Mykaela McFall, Kaitlyn Roy - Display board [79B]

***Stress and Coping Strategies in College Students***

Jordon Rosson, Colin Damlos-Mitchell, Israel Urbina-Muniz, Josie Martinez - Display board [79C]

***Family Relationships and Mental Health***

Trystin Schaffer, Allison Spencer, Jennifer Mata - Display board [79D]

***An Extended Study of the Misattribution of Arousal in Females***

Megan Scheiner, Hannah Lillie - Display board [80A]

***The Influence of Word Length and Visually Salient Images on Free Recall***

Brittanie Somoza, Coby Strub, Matthew Dallas - Display board [71A]

***The Relationship between Socioeconomic Status and Depression***

Sydnee Stogner, Aspen Blanchard, Sydney Vallin - Display board [80B]

***Effects of Sleep on Academia***

Emily Sutton, Sydni Smack - Display board [80C]

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**SBS – Sociology and Social Work**

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***Behavioral Change: Anxiety***

Breck Andrews - Display board [100C]

***Behavioral Change Project: Increasing Spirituality***

Tyler Atkinson - Display board [100D]

***Effect of Employment Status on Student Academic Success***

Kira Bergstrom, Laura Jachimowicz, Lucinda Yazzie, Carly Lenhardt, Gina Garibaldi - Display board [99A]

***A New Healthy Lifestyle***

Krystal Burns - Display board [99B]

***Behavioral Change***

Morgan Comeau - Display board [99C]

***Relationships and Self-Esteem***

Kendra Crowe, Beth Diehl, Katelyn Peets, Kristina Gonzalez, Danielle Mori - Display board [99D]

***Behavior Change in Sleeping Habits***

Beth Diehl - Display board [100B]

***Volunteering***

Katheryn Fallis - Display board [98A]

***My Spending Behavioral Change***

Gina Rae Garibaldi - Display board [98B]

***Personal Change: Breakfast and Planning***

Krysten Gonzales - Display board [98C]

***How to Deal with Stress Positively***

Alexis Guerrero - Display board [98D]

***Stress in Correlation to Responsibility***

Madison Hirschi, McKayla Bradley, Jayden Capilla, Gavin Koivisto, Erin Brown - Display board [97D]

***Internships for Social Work Majors***

Theresa Johnson, Haley Passarella, Amanda Boelter, Jazmine Williams, Pasculita Quochytewa, Samantha Ratliff - Display board [96A]

***Behavior Change***

Carly Kobasick - Display board [96B]

***Behavioral Change: Cleansing the Body***

Selena Lathan - Display board [96C]

***Self-Harm: Don't Ask, Don't Tell!***

Antonio Leon, Miles Jones, Eric Wolf Schuller, Karla Rodriguez, Paige O'Fallon - Display board [96D]

***Behavioral Transformation***

Alexsandra Lott - Display board [95A]

***Should Technology Courses be a Requirement for the Social Work Major?***

Michelle Maciszewski, Amber Henne, Farrah Tsosie, Kaitlyn Crawford, Vanaessah Johnson - Display board [95B]

***Can Being Healthy and Fit Make a Difference in Your Happiness?***

Isabella McCormick - Display board [95C]

***Behavior Change: Improving Time-Management and Productivity***

Shelby Miller - Display board [95D]

***Increasing Happiness Using the Best Possible Self Technique***

Brandon Najera - Display board [94A]

***Weight Loss and Exercise***

Ariana Petrides - Display board [94B]

***Reducing Marijuana Smoking***

Megan Poston - Display board [94C]

***Finding Consistency in the Inconsistent Lifestyle***

Abel Quintana - Display board [94D]

***Healthier Me!***

Anahy Ruiz - Display board [93A]

***The Effects of Marijuana on GPA***

Anna Sloan, Megan Poston, Abel Quintana, Alexander Demyan, Mackenzie Bayuk - Display board [93B]

***Take Action against Stress***

Rebecca Stoffel - Display board [93D]

***Behavior Change: Fitness and Wellness***

Paola Villa - Display board [93C]

***Behavior Change Project***

Sarah Weick - Display board [97C]

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**SBS – Women's and Gender Studies**

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***Affective Citizenship under the Nation-State***

Tara Casey - Display board [91B]

***The Affective Outcomes of Within-Race Racism among Hispanic Americans***

Daniella Clara - Display board [88D]

***Healing and the Transmission of Affect***

Rebekah Kamp - Display board [84D]

***Face Blindness and Affect Theory***

Briaunna Melchor - Display board [84B]

***The Role of Shame in Interracial Relationships***

Marc Moore-Sharp - Display board [81D]

***Use of Rage to Decolonize Space***

Danielle Mori - Display board [81B]

***Affective Production through Neoliberal Economic State Transformation***

Michaela Mujica-Steiner - Display board [77D]

***Music as Embodied Cognitions of Affective States***

Abby Perkins - Display board [88B]

***Music as Embodied Cognitions of Affective States***

Abby Perkins - Display board [91D]

***Disability: Why Are We Missing from Theory?***

Tesla Vance - Display board [77B]

***The Affective Effects of Masculinity, Racism, and Homophobia within Gay Men***

Gabriel Villarreal - Display board [74D]

***The Role of Shame in Women's Intimate Relationships***

Alyssa Whetzel - Display board [74B]

***Emotional Effects of Abortion***

Alexandria Whitman - Display board [70D]

***Representations of Sexual Minorities in South African Media: Does Same-Sex Marriage Matter?***

Caitlin Yates, Julie Moreau - Display board [70B]

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**University College – First Year Students 111**

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***The Mozart Effect: The Power of Music***

Courtney Cipolla, Stefanie Meeder, Reylan Alfafara - Display board [130C]

***Physiological and Psychological Effects of Music on the Human Body and Brain***

Moriah Evras, Terrion Reynolds, Dana Giuffre - Display board [128C]

***Effects and Efficiency of Music Therapy***

Caleigh Morrow - Display board [129A]

***Can Sound Make You III?***

James Phillips - Display board [129C]

***The Effect of Music on Special Needs***

Sydney Russell, Isabella Mendoza - Display board [128A]

***A Study of Music Evolution as a Living Organism***

Miguel Sotelo, Penny Trunzo - Display board [130A]

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**University College – University Studies**

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***Global Migrant Connections***

Olivia Odell, Abigail Perry, Tukee Begay, Gema Castillo, Lucy Greenbaum - Display board [127A]

***The Death of Technicolor***

Jessika Selter - Display board [127C]

***How Technology and Global Awareness, Together, Have Influenced the Fashion Industry***

Amanda Aurand - Display board [126A]

***The Seeds of Change: How Adopting a Plant-Based Diet Can Transform Your Health***

Devon Bacchi - Display board [126C]

***Resurrection Belief and Judaism***

Caleb Greenwood - Display board [122D]

***The Pros and Cons of Complete Integration of Females into the Military***

Chloe Hotman - Display board [125A]

***Culture, Its Relationship to Business Practices and Leadership Qualifications***

Tessa Lembke - Display board [125C]

***Is Preventing the Allocation of Fossil Fuels to Generate Electricity a Viable Means to Help Create More Sustainable Energy in a Cleaner Manner?***

Garrett Prather - Display board [124A]

***Pink Drawing Room Noise***

Jeremiah Schenck III - Display board [123C]

***Slippin' Mickey's: The Subliminal Marketing of Disney***

Kellen Turton - Display board [124C]

***GPA of Athletes vs. Non-Athletes***

Mariah Willadsen - Display board [123A]

***Conflicting Identities of Mexican Americans***

Janinne Flores - Display board [122B]

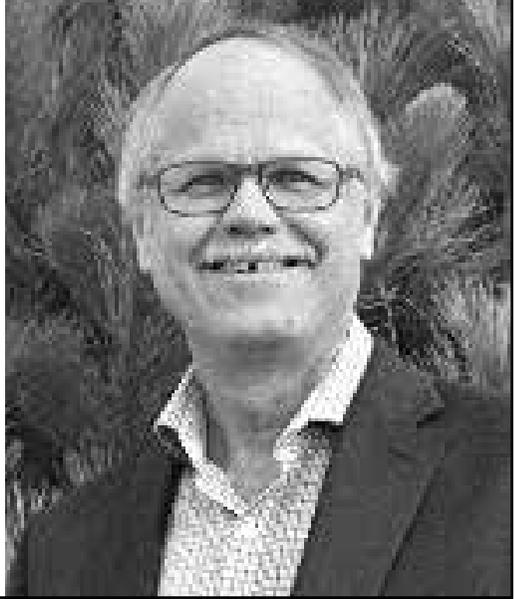
**Luncheon for CEFNS Presenters,  
Faculty Mentors, and Judges  
Keynote Speaker: Paul C. Begovac, Ph.D.**

**"Chasing The Discovery Lightbulb"**

**Paul C. Begovac, Ph.D.**

*Business-Technology Leader  
W.L. Gore & Assoc, Inc.*

**Friday, April 29, 2016  
11:30 AM – 1:00 PM  
du Bois Ballroom**



## **LUNCH**

11:45 AM - 1:00 PM

**Skydome Stage B: Honors Convocation &  
Awards Ceremony**

11:45 AM - 1:00 PM

**Skydome Stage D: University College  
Awards Ceremony**

# AFTERNOON SESSION

## Skydome CAL Floor

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2:00 PM - 4:00 PM – Exhibit

**Throwing Pottery** - CAL, Art  
NAU Clay Club

**3D Scanning - CAL, Art**  
Art 151 3D Design Class

**ART 497 Exhibition** - HONORS, Honors Program  
Lauren Kalt, Taryn Schreiner, Oli  
Wheeldon, Olivia Yuen, Sara Bogle

## Skydome FCB Tables

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2:00 PM - 4:00 PM – Exhibit

**DRWH Education towards Learning** - FCB,  
Business - Computer Information Systems  
Renaldo Holgate

**Tastes from around the World!** - FCB, Hotel and  
Restaurant Management  
Christine Carver

**Cooking Sous Vide with Beer** - FCB,  
Hotel and Restaurant Management  
Caleb Shroyer, Matt Julien

## Skydome HONORS Floor

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2:00 PM - 4:00 PM – Exhibit

**Tombstone, Arizona, and the Myth of the  
Wild West** - HONORS, Honors Program  
Miriam Campana, Amelia Krieg, Madison  
Kuyper, Morgan Louvier, Megan Nolan, Elora  
Palmer, Samantha Schommer, Emily Sulka, Rose  
Tarquini-Cassell, Allison Theisen, Patrick Warfel

## Skydome Roundtable R1

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1:15 PM - 1:45 PM – ROUNDTABLE DISCUSSION  
**The Future of Medicine and Motion** - HONORS,  
Honors Program  
Ariana Bebo, Lukas Merkley, Amy Sanderson

2:00 PM - 2:25 PM – ROUNDTABLE DISCUSSION  
**Teaching Teachers to Teach Culture** - COE,  
Educational Leadership  
Jessica Stott

3:00 PM - 3:25 PM – ROUNDTABLE DISCUSSION  
**Homework: The Effects and Why It Needs  
to Be Rethought** - COE, Teaching and Learning  
Shaelyn Jiron

## Skydome Roundtable R2

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1:15 PM - 1:45 PM – ROUNDTABLE DISCUSSION

***Social Landscapes of the Future*** - HONORS,  
Honors Program  
Thalius Belenti, Marley Kelso,  
Kendall Weber, Caleb Wheeler

3:30 PM - 3:55 PM – ROUNDTABLE DISCUSSION

***Saved by the Bell: Alternative Philosophies  
of Teaching*** - COE, Teaching and Learning  
Mallory Marquette, Rachel Geltmaker

2:30 PM - 2:55 PM – ROUNDTABLE DISCUSSION

***The Impact of Literacy on Academic  
Achievement*** - COE, Educational Specialties  
Lauren Durant, Lindsey Denny,  
Brooke Lewis, Daniel Wong

## Skydome Roundtable R3

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1:15 PM - 1:45 PM – ROUNDTABLE DISCUSSION

***Traditional Ecological Knowledge +  
Technology = Future Survival*** - HONORS, Honors  
Program  
Scottie Bayles, Vanice Hoepfner,  
Melissa Jacquez

## Skydome Stage A

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### Music that Delights and Informs Us

1:15 PM - 2:00 PM – ORAL PRESENTATION

***From Graphic Notation to Theatre Percussion:  
A Study of Percussion Ensemble Literature  
Based upon Thierry De Mey's Musique  
de Table*** - HONORS, Honors Program  
Phoebe Hughes

1:15 PM - 2:00 PM – ORAL PRESENTATION

***A Listener's Guide to Edgard Varese's  
Flute Work*** - HONORS, Honors Program  
Kaitlyn Leung

### Making Sense of Bias, Disability, and Injustice

2:00 PM - 3:00 PM – ORAL PRESENTATION

***A False Confession of Justice*** - HONORS,  
Honors Program  
Katie Fielder

2:00 PM - 3:00 PM – ORAL PRESENTATION

***Disability and the Media*** - HONORS, Honors  
Program  
Amy Sanderson

2:00 PM - 3:00 PM – ORAL PRESENTATION

***The Other Half: Binaries and Others in Folklore  
across the World*** - HONORS, Honors Program  
Sydney Huetter

## Authentic Education, Strong Communities

3:00 PM - 3:20 PM – ORAL PRESENTATION

***From School to Shoal: A Manifesto for Authentic Education*** - COE, Educational Specialties

Emmaline Frey

3:20 PM - 3:40 PM – ORAL PRESENTATION

***Implementing Place-Based Education to Build a Stronger Community*** - COE, Educational

Specialties

Michael Quinn

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## Skydome Stage B

### Civic Engagement in the Classroom and in a Senior Living Community

1:15 PM - 2:00 PM – ORAL PRESENTATION

***The Peaks Senior Living Community: Improving the Lives of Its Residents*** - HONORS, Honors

Program

Molly Bjerck, Ashley Mutchek,

Katelyn Johnson, Shayna King

2:00 PM - 3:00 PM – ORAL PRESENTATION

***The Craft of Fiction, 2*** - HONORS, Honors

Program

Jessica Van Lith, Katie Miller, Aden

Polydoros, Kelly Lienhard, Alycia Lichtas

1:15 PM - 2:00 PM – ORAL PRESENTATION

***Integrating Critical Pedagogy and Civic Education in Today's Classrooms*** - HONORS,

Honors Program

Jordan Morales

3:00 PM - 4:00 PM – ORAL PRESENTATION

***Civic Engagement through Environmental Education, Thrift Stores, and Diversity***

***Awareness*** - HONORS, Honors Program

Ashlee Hart, Lauren Kalt, Eva Marino,

Emily Haworth, Samantha Watkins,

Thuy Tran, Aubrial Harrington

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## Skydome Stage C

### Transgender and Third Sex Representations

1:15 PM - 2:00 PM – ORAL PRESENTATION

***Global Interpretations of Gender Identities*** - HONORS, Honors Program

Ben Halliday, Paola Felipe

1:15 PM - 2:00 PM – ORAL PRESENTATION

***An Exploration of Gender Crossing in Shakespeare's Twelfth Night*** - HONORS, Honors

Program

Alice Pratt

## Creative Interpretations of Dystopias

2:00 PM - 3:00 PM — ORAL PRESENTATION

**Goodbye Gravity and The Other Side: Two Novels-in-Progress** - HONORS, Honors Program  
Niki DeShazo

3:00 PM - 4:00 PM — PERFORMANCE

**Dystopian Stories: A Reading (2)** - HONORS, Honors Program  
Charlie St. Clair, Nicholas Anable, Jackson Pergiel, Haley Duncan

2:00 PM - 3:00 PM — PERFORMANCE

**Turn Your Dystopia into a Utopia: An Infomercial** - HONORS, Honors Program  
Tessa Diehl, Jensen Grief

## Skydome Stage D

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1:15 PM - 2:00 PM — PERFORMANCE

**Dystopian Stories: A Reading (1)** - HONORS, Honors Program  
Ian Carr, David Lupton, Sara Pugsley, Scott Sprauer

3:10 PM - 3:30 PM — ORAL PRESENTATION

**Visualizing Big Data with D3** - CEFNS, Electrical and Computer Engineering  
Ashley Green

2:00 PM - 3:00 PM — ORAL PRESENTATION

**Too Much/Too Little Ego and Compassion** - HONORS, Honors Program  
Amanda Binkley, Corin Hill, Abbey Johnson, Zeke Saxman

3:30 PM - 3:50 PM — ORAL PRESENTATION

**Calcium and Phosphorous Distributions in the Mineral Layer of Atlantic Tarpon Scales** - CEFNS, Biological Sciences  
Brett Cutler

## duBois Fremont Room

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1:15 PM - 1:40 PM — ORAL PRESENTATION

**Telecomm Wind Turbine Design and Deployment** - CEFNS, Mechanical Engineering  
Michael Wertz, Ryan Schatz, Norman Clark, Brock Pellerin, Anas Alkandari, Hashim Alramadhan

2:05 PM - 2:30 PM — ORAL PRESENTATION

**NAU Collegiate Wind Competition 2016 Tunnel, Electrical** - CEFNS, Mechanical Engineering  
Brayden Worrell, Brayden Worrell, Zachary Sabol, Korey Holaas, Jess Robinson, Michael Evans, Scott Muenta

1:40 PM - 2:05 PM — ORAL PRESENTATION

**Department of Energy Collegiate Wind Competition, Mechanical Design** - CEFNS, Mechanical Engineering  
James Melton, Randon Allen, Tyler Richards, Nathan Cenicerros, Jessica Bauer, Jeremy Cook

## duBois Marshall Room

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1:15 PM - 1:40 PM — ORAL PRESENTATION

**City of Flagstaff Roundabout Design** - CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Kevin Farrell, Ralph Ubert, Amal Abdelaziz, TJ Sullivan

1:40 PM - 2:05 PM — ORAL PRESENTATION

**City of Flagstaff Traffic Signal Redesign** - CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Joseph Davis, Zachary Crimmins, Jace Elkins, Jordan Weyrauch

2:05 PM - 2:30 PM — ORAL PRESENTATION

**Cinder Lake Alternative Landfill Liner Design** - CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Jessika Gloor, Steven Hoff, Lamyaa Alrumaidhin, Patrick Bridgman

2:40 PM - 3:05 PM — ORAL PRESENTATION

**Sinclair Wash Riparian Habitat Enhancement Feasibility Study** - CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Sierra Holloway, Maya Huffman, Skyler Quinn, Fahad Alyatama, Mohammed Almousawi

3:05 PM - 3:30 PM — ORAL PRESENTATION

**RV Wastewater Treatment** - CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Ryan Marshall, Chris Young, Chris Yazzie, My Hoang

3:30 PM - 3:55 PM — ORAL PRESENTATION

**Clover Springs Riparian Restoration** - CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Dillon Corrington, Jake Fleishman, Michael Robinson

## duBois Meadows Room

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1:15 PM - 1:40 PM — ORAL PRESENTATION

**YAX: Taxonomic Assignment Using Metagenomic Shotgun Sequences** - CEFNS, Electrical and Computer Engineering  
Hayden Westbrook, Evan Bolyen, Mike Deberg, Andrew Hodel

1:40 PM - 2:05 PM — ORAL PRESENTATION

**Holocaust Exhibit: Through the Eyes of Youth** - CEFNS, Electrical and Computer Engineering  
Luke Sanchez, Herbie Duah, Michael Ortega, John Loudon

2:05 PM - 2:30 PM — ORAL PRESENTATION

**Measuring Accentedness** - CEFNS, Electrical and Computer Engineering  
Erik Dixon, Cameron Gaskin, Austin Abhari, Harrison Lambeth

2:40 PM - 3:05 PM — ORAL PRESENTATION

**Gigapixel Image Rendering** - CEFNS, Electrical and Computer Engineering  
Matthew Ostovarpour, Daniel Garcia-Briseno, Douglas Peterson, Thomas O'Brien

3:05 PM - 3:30 PM — ORAL PRESENTATION

**Together** - A Lightweight Group Organization Tool - CEFNS, Electrical and Computer Engineering  
Ryan Batchelder, Eric Huff, Christopher Marcus, Jonathon Todd

## duBois Room A

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1:15 PM - 1:40 PM – ORAL PRESENTATION

***Museum of Northern Arizona Meadow Riparian Habitat Enhancement Project*** - CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Noor Alsadi, Matthew Sorenson, Jasem Alrumaidheen, Khaled Alazmi

1:40 PM - 2:05 PM – ORAL PRESENTATION

***Flagstaff Family Food Bank: Food Storage Facility Flooding*** - CEFNS, Civil Engineering, Construction Management, and Environmental Engineering  
Elena Smith, Erik Henricksen, Garrett Ribas, Meshal Alotaibi

## Liberal Studies (Bldg #18) Room 120

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1:30 PM - 1:45 PM – ORAL PRESENTATION

***Contemporary Japanese Installation Art and Its Medieval Roots*** - CAL, Comparative Cultural Studies  
Emily Lawhead

2:45 PM - 3:00 PM – ORAL PRESENTATION

***Documenting the Unknown: Analyzing Lewis and Clark as Naturalists*** - CAL, History  
Addison Guevara

1:45 PM - 2:00 PM – ORAL PRESENTATION

***An In-Depth Analysis of 20th Century American Design and Architecture's Foreign Influences*** - CAL, Art  
Rachel Pool

3:00 PM - 3:15 PM – ORAL PRESENTATION

***Persian Ethnicity during the Achaemenid Period*** - CAL, History  
Mark Holden

2:00 PM - 2:15 PM – ORAL PRESENTATION

***Shinto and Studio Ghibli: Japanese Traditional Religious Themes in Animated Film*** - CAL, Comparative Cultural Studies  
Alden Cormany

3:15 PM - 3:30 PM – ORAL PRESENTATION

***Gendered Terror: Orientalism in French News Representations of Islamic Terrorism*** - CAL, Global Languages & Cultures  
Elizabeth Nichols

2:15 PM - 2:30 PM – ORAL PRESENTATION

***Transfusion Confusion: Empathy and the Uncanny in Dracula*** - CAL, English  
Samantha Orsulak

## CAL – Art

***An Adaptable Hotel for any Culture:  
Designing Universally***

Emelia Box - Display board [49B]

***The Importance of Good Design in Affordable  
Housing***

Christina Dickinson - Display board [49D]

***Farm to Table: Restaurant Design  
for a Healthier Generation***

Lindsey Griffin - Display board [50C]

***Where are the Female Artists?***

Leialoha Katsuda - Display board [51A]

***Disney Boutique Hotel***

Taylor Ray - Display board [51C]

***Iconography of Seasons in Japanese  
Pictorial and Food Art***

Emani Stanford - Display board [52A]

***Planning for the Future***

Zoé Wristen - Display board [52C]

## CEFNS – Biological Sciences

***Do Amphibious Fishes Jump Farther than Fully  
Aquatic Fishes?***

Curtis Choitz, Michael Minicozzi, Alice  
Gibb - Display board [31C]

***Extraction and Isolation of Adipose-Derived  
Stem Cells***

Martha Fowler, Robert Kellar - Display board [34C]

***Uranium's Effect on Estrogen Sensitive  
Genes in Early Embryonic Danio Rerio***

Jonathan Grunwald, Stephan Ramos,  
Catherine Propper - Display board [31A]

***A Comparison between the Satisfaction and  
Effectiveness of Personal Training, Open Gym,  
and Group Fitness***

Averie Johnson - Display board [33D]

***How Does Acute Ethanol Exposure Affect  
Metabolism within Burkholderia Thailandensis  
E264 and Pseudomonas Aeruginosa Overtime?***

Kristi Mascarenas, Victor Jimenez, Fernando  
Monroy, Inez Pabian, Wayne Nez, Destiny  
Valenzuela - Display board [25C]

***Detecting Melioidosis: Development of  
MagPix Assays to Limit Disease***

Rachel Meyer, Carina Hall, Jason Sahl,  
Vanessa Theobald, Mark Mayo, Joseph  
Busch, Bart Currie - Display board [26B]

***Exercise Redox Signaling: Intensity Matters***

Michael Newell, Tinna Traustadottir, Aaron  
Done, Travis Cluckey - Display board [25B]

***Positivity and Prevalence of Leptospira DNA in  
Human and Animal Samples from Rural Ecuador***

Sonora Olivas, Veronica Barragan, Erin Miller,  
Jorge Chiriboga, Gabriel Trueba, Dawn  
Birdsell, Crystal Hepp - Display board [27D]

***Effects of Ethanol on Alveolar Macrophage  
(M $\Phi$ ) Polarization during Pseudomonas  
Aeruginosa Infection***

Inez Pabian, Wayne Nez, Kristi Mascarenas,  
Destiny Valenzuela, Victor Jimenez,  
Fernando Monroy - Display board [27B]

***Development of Antibody Reactive Markers  
to Rapidly Diagnose Patients Infected with  
Burkholderia Pseudomallei***

Lauren Pristo - Display board [34A]

***Effects of Activation on Force-Velocity  
Properties of Muscles during Cyclical  
Length Changes***

April Rodriguez, Uzma Tahir, Kiisa  
Nishikawa - Display board [28D]

***MAGPIX: a New Technological Tool for  
Diagnostics and New Vaccines Development  
for Infectious Diseases***

Isaiah Self, Erik Settles, Dawn Birdsell, David  
Wagner, Paul Keim - Display board [29B]

***Testing the Pathogenicity of Close Phylogenetic Relatives of Burkholderia Pseudomallei in a Laboratory Mouse Model***

Lindsay Sidak-Loftis, Victor Jimenez, Courtney Seavey, Erick Settles, Rachel Meyer, Heather Center, Apichai Tuanyok - Display board [29C]

***Local Adaption of Megachilidae Bees along an Elevation Gradient***

Atticus Wolf - Display board [30B]

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## CEFNS – Chemistry and Biochemistry

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***Molecular Dynamics Investigation of Benzene Ordering at a Silica Interface***

Kevin Gochenour - Display board [22D]

***Synthesis of Isoxazoline Bacterial Growth Inhibitors through Nitrile Oxide Cycloaddition Reactions***

Bradley Marsh, Serenity MacLennan, Jose Parra - Display board [23D]

***Laser Ablation ICP-MS Analysis of Nine Metals in Size-Segregated, Submicron Atmospheric Particles Collected in Church Rock, New Mexico, and Flagstaff, Arizona***

Daniel Vechiola, Daniel Vechiola, Marin Robinson - Display board [24C]

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## CEFNS – Civil Engineering, Construction Management, and Environmental Engineering

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***NAU ASCE Concrete Canoe Capstone***

Chelsie Kekaula, Colton McConnell, Brent Lipar, Emily Melkesian, Evan Kaichi - Display board [7C]

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## CEFNS – Electrical and Computer Engineering

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***Exponential Perspective Rendering Engine***

Emily Bartman, Garrett Steffen, Dakota Jones, Yi Zong - Display board [6C]

***Automated Terrain Mapping of Mars***

Jorge Felix Caudillo, Tsosie Schneider, Sean Baquiro, Matthew Enright - Display board [4B]

***HelpTile Mobile Application for Tagging Websites***

Joshua Frampton, Temitope Alaga, John Dance, Jun Rao - Display board [4A]

***EvaluRate***

Dylan Grayson, Conner Swann, Brian Saganey, Brandon Paree - Display board [3D]

***Developing a Graphical Interface for Genomic Analysis Tasks***

Jean-Paul Labadie, Luis Valenzuela, Jordan Marshall, Abdulaziz Alhawas - Display board [5B]

***Preventing Falls: Real-Time Analysis of Abnormal Walking Characteristics***

Jay Morita, Robert Kasper, Mohammad Aljoilan - Display board [5C]

***Mobile Data Collection***

David Nagel, Justin Poehnel, Jack Burrell, Ahmad Meer - Display board [6A]

## CEFNS – Environmental Sciences and Environmental Studies

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***Wildlife Camera Trapping Project in Tuzigoot and Montezuma Well: Random Placement vs. Strategic Placement***

Lauren Badertscher, Samuel Salgado, Cara Blout, Amelia Allen - Display board [21C]

***The Restoration of Native Flora at Montezuma Well***

Carolyn Box, Colby Collins, Deavila dePersia, Michael Sloan - Display board [18D]

***CHEFS Garden Program Consulting Project***

Kelsey Dunst, Sara Tilford, Sedona Spann - Display board [18B]

***Environmental Justice: Recognizing Animals as Moral Agents***

Sarah Holditch - Display board [21A]

***Developing Rainwater Catchment Manual for Navajo Nation***

Jessica Keetso, Maxx Utter, William Churchill, John Begay, Jacques Seronde - Display board [19D]

***Drafting and Implementing a Restoration Plan for the West Pasture at Montezuma Well***

Sam Phalon, Madison Reese, Kelsey Blodgett - Display board [19B]

***Camera Trapping at Restored Riparian Zones***

Helena Van Winkle, Alexander Wilson, Jake Hirsch, Jeremy Scuderi - Display board [20A]

## CEFNS – Forestry

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***Potential Viability of Biopesticide for Managing Bark Beetles in Forest Ecosystems***

John Kaplan - Display board [16C]

***Comparing Metabolic Rates of Native Chubs Species and Non-Native Fish Species of Arizona***

Harlan Tso, Matthew O'Neill - Display board [17B]

## CEFNS – Geology

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***Using Satellite Remote Sensing to Study the Birth and Fate of a New Volcanic Island***

Dane Henderson - Display board [13C]

***Placing New Constraints on the Unexpectedly Complex Formation of Meteor Crater***

Alexandra Huff, Justin Hagerty, Tenielle Gaither, Amber Gullikson - Display board [13A]

***An Early Devonian Vertebrate Fauna from the Interlake Group Williston Basin, North Dakota***

Robert Lutton - Display board [14C]

***Understanding the Eruption History of SP Crater, Northern Arizona, through Tephra Mapping***

Claire Sotelo - Display board [14A]

***Testing a New Method for Determining Soil Moisture Infiltration***

Carl Thomson - Display board [15C]

***A Comparison between the Chemistry of Cinder Deposits and Volcanoes in the San Francisco Volcanic Field***

Patrick Warfel - Display board [15A]

***Debris Flow Potential in the Slide Fire Area***

Kyle Wyman - Display board [16A]

## CEFNS – Mathematics and Statistics

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***Counting Primitive Sorting Networks***

Dustin Story - Display board [12A]

## CEFNS – Mechanical Engineering

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### ***Wildlife Telemetry Drone***

Jeffrey Eberle, Lauren Adoram - Kershner, Jason Vizcaino, Kellan Rothfus - Display board [2C]

### ***3D Model Verification of Magnetic Shape Memory Alloys***

Jeffrey Eberle - Display board [2D]

### ***Unmanned Aerial System (UAS) for Wildlife Tracking***

Christopher Gass - Display board [3B]

### ***Hozhoni Art Program Assistive Easel***

Jeannette Nelson, Margaret Wisman, Adam Barad, Brittnee Barrett, Logan Bacher - Display board [1A]

### ***Hozhoni Button Making Team***

Dylan Oliva, Kristen Rieger, Ryan Torres, Bryce Igo, Abdulah Almerri - Display board [3A]

### ***Calcified Vessel Model***

Michael Rickerd, Skyler Buchanan, Cameron Fisher, Nolan Kirk, Bryce Ribucan, Kathryn Shallcross - Display board [2B]

## CEFNS – Physics and Astronomy

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### ***Kinetics of Phase Formation and Microstructure Development of High Purity Silicon Nitride Ceramics***

Shyanne Dustrud - Display board [11B]

### ***Numerical Modeling of Star Formation Mechanisms within Interacting Galaxies***

Elizabeth Gehret, Curtis Dankof, Lisa Chien - Display board [11A]

### ***Stars for the Future***

Kiril Kirkov - Display board [9A]

### ***Characterizing the Evolution of Mars South Polar Jets and Fans Using CRISM-THEMIS Observations***

Etude O'Neel-Judy, Timothy Titus - Display board [10C]

### ***Scientific Journalism: Its Significance and My Personal Experience***

Austin Shannon, Randy Wilson - Display board [10A]

### ***Effect of Sediment Source on Dune Activity, Navajo Nation, Arizona***

Annette Sunda - Display board [11D]

## CEFNS – Center for Science Teaching and Learning

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### ***Examining Algebra 1 Students' Self-Efficacy Beliefs after Engaging in a Lesson Focused on Verbal Reasoning during a Challenging Task***

Joseangel Gonzalez - Display board [8C]

## COE – Educational Psychology

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### ***Gender Essentialist Thinking among Students: The Role of Background and Academic Focus***

Kylie Jones, Lisa Persinger, Sara Abercrombie - Display board [47B]

## COE – Educational Specialties

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### ***Silence is Deadly: Culture in the Classroom***

Nicole Acquaviva, Tiffani Watkins - Display board [47D]

### ***Drawing on Culturally Responsive Teaching in the General Music Classroom***

Alexandra Fardelos, Steven Cheatham - Display board [48B]

**University for You**

Amy Jones - Display board [48D]

**Creating a Classroom of Empathy**

Ashlee Trujillo - Display board [46B]

**Cultural Dance**

Jolana Ziskovsky - Display board [46D]

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**COE – Teaching and Learning**

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**Service Dog Fraud**

Stephanie Horton, Meghan Keller, Elaine Durcan - Display board [45B]

**Growing Students' Education: The Impact of School Gardens**

Lara Kritz - Display board [44C]

**Reforming School Discipline Policies**

Hannah Little, Brittany Nigh, Demri Williams, Briana Abney - Display board [45C]

**Physical Education in Children**

Katie Snider, Alyssandra Sandoval - Display board [44A]

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**FCB – Business - Accounting**

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**Uber's Drivers: What Are They?**

Nolen Cook, Eric Yordy - Display board [35A]

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**FCB – Business - Economics**

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**The Future of the National Debt**

Qiaoqi Bao - Display board [35B]

**How Planned Parenthood Affects the Economy**

Sydney Berner - Display board [35C]

**Social Security**

Lanae Blocker, Kolbi McDaniel, Matt Wilkins, Rielly Spillman - Display board [35D]

**Driving and Fines**

David Dawood Borhani - Display board [36A]

**Economic Analysis of the Keystone XL Oil Pipeline**

Hunter Briggs - Display board [36B]

**Pros and Cons on Hydropower at Parker Dam**

Adrian Chavez - Display board [43A]

**Renewable Energy in the Developing World**

Phillip Chavez - Display board [36C]

**End Production of Low Denomination Coins**

Marco Chiaradia - Display board [36D]

**Finding the Upper and Lower Bounds of Unemployment Masked by Incarceration**

Sarah Christian - Display board [37A]

**Assessing the Externality Cost of Lead Ammunition**

Sarah Christian, Jessica Armijo, Tyler Monaccio, Boran Wang, Run Zhang - Display board [37B]

**Alternatives to the International Ivory Trade Ban to Conserve Elephant Populations**

Ryan Cook - Display board [37C]

**An Analysis on How to Eliminate the Federal Reserve System**

Zachary Davis, Bradley Austin, Cameron Kownack, Daityevon McFadden - Display board [37D]

**The Effects of Oil Prices on the U.S. Economy**

Brennan De La Riva - Display board [38A]

**An Analysis of the Accuracy of the GDP Measurement**

Tyler Douglas - Display board [38B]

**An Analysis of Publicly Funded Sports Stadiums**

Tarrin Fair, Erick Centeno, Andrew Dicarlo - Display board [38C]

**The Economic Impact of Bottled Water in the United States**

Xueyang Guan - Display board [38D]

***The Detrimental Economic Effects of Zebra Mussels in the Great Lakes***

Robert Jager, Carrie Bindschadler, Jonathan Salazar, Ning Suo, Zhilin Zhang, Hengyue Zhao, Robert Jager - Display board [39C]

***Using Regression Modeling to Predict the Winner of the 2016 MLB World Series by the All Star Break***

Beau Lawrence - Display board [39A]

***Abolishing the Department of Education***

Beau Lawrence, Shane McLaughlin, Brian Sniegowski, Joe Ford - Display board [39B]

***Bankruptcy and Development of Chinese Photovoltaic Companies***

Yuqi Liebig - Display board [39D]

***Should the Government Subsidize Green Energy?***

Haley Lucas, Ben Boatwright, Nick Gager, Sam Woodrich - Display board [40A]

***Love Canal Hazardous Waste Site***

Haley Lucas, Cody Cordell, Luke Hall, Dylan Ray, Yilin Li - Display board [40B]

***Industrial Production Economic Indicator***

Matthew Mason - Display board [40C]

***Environmental Deposit Refund System***

Matthew Mason, Dereck Grey, Ryan Modi, Shengjie Mao, Bo Wang, Shandor Whitcher - Display board [40D]

***A Bottled Bill for Arizona***

Mason Pendleton, Yumeng Li, Yifan Shan, Cyrus Guccione, Andrew Bolshazy, Richard Crinigan - Display board [41A]

***Potential Economic Impact of the South China Sea Conflict***

Frank Powell - Display board [41B]

***A Breakdown of Public Choice Theory with Analysis of Health Care Regulation in the Affordable Care Act***

Trevyn Scott - Display board [41C]

***An Economic Examination of the SO2 Emission Trading Program in the United States***

Amie Self, Jifu Bao, Zixu Chen, Jake Luft, Kolbi McDaniel, James McNown - Display board [41D]

***Social Security***

Rielly Spillman - Display board [42A]

***Education***

Rielly Spillman - Display board [42B]

***Economic Benefits vs. Environmental Costs of Climbing Expeditions on Mount Everest***

Cole Swearingen - Display board [42C]

***Economic Impact of Operating/Shutting Down Nuclear Plants in Japan***

Koji Tanaka - Display board [42D]

***Keystone Pipeline***

Matthew Wells, Hunter Briggs - Display board [43C]

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## FCB – Business - Management

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***Social Business Revolution***

Alexander Hayes - Display board [43D]

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## Global Learning Initiative

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***BVAR 2015 Xunantunich Conservation Project***

Megan Kumorek - Display board [107A]

***The Influence of Hands-on Engagement on Conservation Efforts***

Annie Dyer, Tad Theimer - Display board [107B]

***Alternative to Animal Testing - Identification and Classification of Neurotoxic Chemicals***

Amy Swartz - Display board [107C]

***Contemporary Japanese Installation Art: Five Approaches to Exhibition Space***

Emily Lawhead - Display board [107D]

**South Africa: The Painful Truth**

Cameron Gaskin, Hassan Allison, Jesse Brookins,  
Tylor Brown, Vansamuel Diggs, Corbin Jountti,  
Ronnie Manning - Display board [108A]

**Science Fiction to Reality: Discovery  
and Beyond**

Katie Lamaestra, Jorge Pantoya, Paulina  
Zepeda Uresti - Display board [108C]

**Trouble in the Rain Forest: A Curriculum for  
Grades 1, 2, & 3**

Carla Torres, Lisa Lundin, Janeth Machuca, Jocelyn  
Chacon, Lorenia Lopez - Display board [108B]

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**Honors – Honors Program**

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**Medicine in Eastern, Western, and  
Endemic Tribes**

Molly Carney, Gillian Brailsford, Lydia Sheperd,  
Andi Embry - Display board [104B]

**The Benefits of Plant-Based Remedies and  
Diets in Religious Groups and Cultures**

Rayna Castillo, Tyler Lietz, Erika  
Bert - Display board [104D]

**Realistic Medical Emergencies in the  
Apocalypse**

Ashley Colby, Evan Galipeau - Display board [104A]

**The Effects of Social Media on Teen Drinking**

Natalie Cravens - Display board [106B]

**Psychoactive Plants**

Emile Eich, Julia Gardiner, Graham  
Whitney - Display board [105A]

**Rare but Important**

Mary Harrington - Display board [105B]

**The Clone Wars: Corn Strikes Back**

Claire Sipos, Jacob Miller, Andrea Smith,  
Kaitlyn Tighe - Display board [106A]

**America's Sweetheart**

Gabriella Wojdyla, Shayla Butcher-Sliffe, Sara  
Dresler, Karla Witte - Display board [105D]

**Developing an Inexpensive Cart to Carry  
Precision Agriculture and Phenotyping  
Instrumentation for Developing Nations**

Talon Mills - Display board [106D]

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**SBS – Anthropology**

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**The Archaeological Record of the  
Aka Tribe of the Congo**

Maren Reich - Display board [56A]

**A Comparative Analysis of Tibetan Nomadic  
Tribes and Earlier Societies of the Region Using  
Associated Archaeological Correlates**

Tia Watkins - Display board [56B]

**Dating Methods Used in Anthropology**

Juanita Aldridge - Display board [56C]

**Analyzing the Zika Virus Using  
Anthropological Theory**

Gregory Allen - Display board [56D]

**Prehistoric Human Supernatural Beliefs  
and Modern-Day Religion**

Willy Andrews - Display board [55A]

**Language Barriers in the Medical Field**

Paula Beall - Display board [55B]

**Death Rituals of Europe**

Monica Becker - Display board [62A]

**Domestication of Plants in Thailand**

Tatum Bixler - Display board [55C]

**The Prehistory of Nutrition**

Kathryn Bowen - Display board [55D]

**Domestication of Animals in the Middle East**

Kendall Brooks - Display board [54A]

***Walking with No Footprints: The Grand Valley Dani***

Brittneigh Campbell - Display board [54B]

***Animals in Prehistoric Art***

Richard Crinigan - Display board [54C]

***The Mardudjara of Western Australia: The Material Culture of a Hunter-Gatherer Society***

Katherine Damiano - Display board [66C]

***The Written System in the Middle East***

Emma Dickerson - Display board [54D]

***Homelessness in a Mountain Town***

Celine Doyle, Siobhan Doyle, Rayla Maier - Display board [57B]

***Archaeology of Weapons and Warfare in Southern Europe***

Rachel Duffy - Display board [57A]

***Pre History Art: Through the Ages***

Nelson Flores - Display board [57C]

***The Origin of Religion in the Neolithic Era***

Alisa Gale - Display board [57D]

***Death and the Afterlife in Prehistoric Europe***

Wyatt Goddard - Display board [58A]

***Evolution of Weapons***

Joseph Gross - Display board [58B]

***The Ethnography and Archaeology of Hunter-Gatherer Societies in Tropical Environments: The Ache of Paraguay***

Kelsey Gruntorad - Display board [58C]

***Symbiotic Relationship between Canines and Humans***

Matt Hall - Display board [58D]

***The Saami of Scandinavia: The Archaeological Correlates of a Pastoralist Society***

Greg Henderson - Display board [59A]

***The Awatimarka of the Andes: Material Culture and the Archaeological Record***

Kaitlyn Jebens - Display board [71B]

***Traditional Navajo Perspectives on Diabetes and Its Influences on Modern Medical Practices***

Sonya John - Display board [59B]

***Archeology of Music in Europe***

Madison Kelly - Display board [59C]

***Bringing Government Agencies into the Digital Age: Increasing Public Access to Knowledge within the Coconino County Forest Service***

Dorothy Kilgore, Sean Flynn - Display board [59D]

***Prehistory of Monumental Architecture in Europe***

Korianne Krause - Display board [60A]

***Prehistorical Art of the Neolithic Time Period***

Kristen Larsen - Display board [60B]

***The Ethnography and Archaeology of Hunter-Gatherer Societies in the Rainforest: The Kombai of West Papua***

Madison Ledesma - Display board [60C]

***Burials of Neolithic Europe***

Dallas Lenzi - Display board [60D]

***African American Literature throughout U.S. History and Its Cultural/Socio-economic Significance***

Amanda MacNair - Display board [61A]

***Prehistory of Spirituality and Religion***

Weaghan Marlowe - Display board [61B]

***Benefits of Cultural Competency in Behavioral Health Settings***

Roger Martinez, Carlos Dominguez - Display board [61D]

***Genocide: The Cause and the Aftermath***

Katie McIlhenny Miller - Display board [61C]

***Significant Monuments and Architecture from China***

Jonathan Perry - Display board [62B]

***The Prehistory of the Domestication of Animals***

Cole Rhodes - Display board [62C]

***The Bakhtiari of Modern-Day Iran: The Material and Archaeological Correlates of a Migratory Society***

Philip Rody - Display board [62D]

***Religion Originating in Israel***

Emily Rytting - Display board [66B]

***Ethnomedicine at Risk***

Alysha Sellers - Display board [63A]

***Homelessness in a Mountain Town:  
A Critical Review***

David Shade - Display board [63B]

***The Ethnography and Archaeology of  
Rainforest Agriculturalist Societies in Tropical  
Environments: The Semai of Malaysia***

Ramsay Shannon - Display board [63C]

***Ancient Monolithic Architecture***

Nicolas Starrett - Display board [63D]

***The Development of Religion & Spirituality***

Joie Strempeke - Display board [64A]

***Determining Instances of Animal Sacrifice in  
Archaeology Based on Animal Remains***

Katie Tappan - Display board [64B]

***Prehistory of Sports Related Architecture***

Jackson Toothman - Display board [64C]

***Looking at UTV62 by Using Applied  
Anthropology***

Chandler Trotter - Display board [64D]

***The Scottish Crofters: Material Culture  
and Archaeological Record***

Megan Vey - Display board [65A]

***The Hygiene Hypothesis: How Clean  
is Too Clean?***

Amanda Warda - Display board [65B]

***Prehistory of Domestication of Plants in Asia***

Sarah West - Display board [65C]

***Weapons and Warfare of the Neolithic  
and Bronze Age***

Grant Williams - Display board [65D]

***The Tools and Weapons of the Stone Age***

Thomas Zupin - Display board [66A]

**SBS – Applied Indigenous Studies**

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***How Has the Overrepresentation of Maori in the  
New Zealand Criminal Justice System Arisen  
and What Effect Has It Had on Contemporary  
Maori Society?***

Matthew Baxter - Display board [67B]

***The Sacredness of the San Francisco Peaks***

Sheridan Couture - Display board [67C]

***Snowbowl Ski Resort vs. Native  
American Tribes***

Hannah Elzer - Display board [67D]

***Indigenous Methodologies: Vital to Research***

Kira Farmer - Display board [67A]

***Consent of Native American Women***

Kirsi Griner - Display board [68A]

***Availability of Energy***

Robert Gullion - Display board [68D]

***Native American Sacred Land Disputes***

Jason Hunsaker - Display board [68B]

***Central Arizona Project***

Cody Johnson - Display board [68C]

***The Federal Clean Power Plan and Carbon  
Emissions on the Navajo Nation***

Tracey Lee - Display board [69A]

***Native American Nutrition Issues***

Parker Lewin - Display board [66D]

***Fort Mojave Water Rights***

Siearra Padilla - Display board [72A]

***Climate Change Impacts on Indigenous  
Communities***

Ulali Phillip - Display board [69B]

***Drugs, Alcohol, and American Indians***

Kevin Pikero - Display board [72B]

***The Effects of Mining on Tribal Nations  
in Arizona***

Athena Talk - Display board [69C]

***New Life, New Purpose***

Jonathan Yellowhair - Display board [69D]

## SBS – Communication

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### ***Alone Pantone***

RJ Barnes - Display board [85C]

### ***An Intercultural Communicative Balance***

Dionisio Casasola - Display board [85D]

### ***Identifying the Social Semiotics of Meals: What is Communicated around the Table?***

Shellee Diggs - Display board [83A]

### ***Acknowledgment through Attachment and Affection***

Veronica Galvez - Display board [83B]

### ***# Ferguson - The Impact of Social Media***

Kelly Hall - Display board [83C]

### ***MyCoin University Pay***

Lianne Kitaoka - Display board [83D]

### ***Intercultural Relationships: Communicating Identities***

Catherine Medina - Display board [82A]

### ***Hip Hop: A Powerful Communicative Force for Social Change***

Yvi Roderus - Display board [82B]

### ***Gender Stereotypes in Film***

Taylor Shaw - Display board [82C]

### ***Bringing Together the Police and Public through Communication***

Aaron Wright - Display board [82D]

## SBS – Criminology and Criminal Justice

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### ***Keeping it Real***

Joyce Cornell, Rayanna Raftery, Joshua  
Totah - Display board [103A]

### ***Abuse and the Impact of Self-Esteem***

Danielle Gerety, Kianna Roper, Ameer  
Park - Display board [103B]

### ***The Modern Day Ghetto and Hip-Hop Reflected in Broadway's Hamilton***

Sarah Henley, Danielle Butler, Nickolas  
Owen - Display board [103C]

### ***Booze & Grades: A Study of Alcohol Consumption and Academic Success***

Alexander LeClair, Breanna Turrentine,  
Peter Keeley, Mitchel Rinehart, Jennifer  
Lavoie - Display board [103D]

### ***The Media's Influence on Police Perceptions***

Austin Mason-Burrows, Latisha Gilmore, Diera  
Mickens, Conor Hill - Display board [102A]

### ***Rationalizing the Death Penalty***

Lacey Munyon, Riley McAuliffe, Amber Jones,  
Austin Vanderveen - Display board [102B]

### ***High Success***

Jared Nunez, Nicole Jablonsky, Daniel Rhinehart,  
Frida Ramos, Sarah Shoffner - Display board [102C]

### ***A Critical Analysis of the Album To Pimp a Butterfly***

Perla Palomares, Timothy Flannery, Jerron  
Anthony - Display board [100A]

### ***Criminal Justice Challenges for Native American Women***

Unalisa Russell - Display board [102D]

### ***To Pimp a Butterfly Album Analysis***

Garrett Snyder, Dakota Smith, Paul Kinder,  
Paul Guzman - Display board [101A]

### ***Latino Rap, Cartels, and Narco Corridos***

Mary Thomas, Greg Haber, Luke Million,  
Austin Cibik - Display board [101B]

### ***The Effects Stimulants Have on Academic Success***

Blain Uphoff, Cody Bednar, Garrett Snyder, Sara  
Mitchell, Deston Coleman - Display board [101C]

### ***Police Perceptions***

Ryan Vilte, Emily Parker, Haley Timar, Morgan  
Meurer, Kyle Zahn - Display board [101D]

## SBS – Ethnic Studies

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### ***The Performance, Politics, and Gender Dynamics of Alter Egos in Hip-Hop***

Alexander Ballesteros, Students of Ethnic Studies 470 - Display board [97A]

### ***Debunking the Myth of Colorblindness among Young Children: Lessons from Research on Race in Early Childhood***

Kelye Scarborough, Angelina Castagno - Display board [97B]

## SBS – Politics and International Affairs

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### ***Sacred Mountain for Sale: Reclaiming History***

Marcus Clanton - Display board [92B]

### ***Islamic Feminism and Its Global Affects***

Kelsey Hitchcock - Display board [91A]

### ***Alcoholism within Native and Indigenous Peoples***

Carson Petersen - Display board [89D]

### ***The Constitution of the Democratic Republic of Pacifica***

Maddison Powers, Vanessa Pomeroy, Caroline Schillinger, Monica Overturf, Christina Meehan-Vernon - Display board [89B]

### ***Girls' Education, Youth Bulges, and Authoritarianism***

Kristy Silva - Display board [90D]

### ***Western Military Strategies against Global Islamist Uprisings***

Cody Whitehouse - Display board [90B]

## SBS – Psychological Sciences

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### ***Empathy in Motion: Self-Other Dynamics of Moving vs. Static Emotional Stimuli***

Dylan Barbera, Taylor Grossman - Display board [80D]

### ***A Review of Present-Centered Therapy and Its Efficacy for Treating PTSD***

Dylan Beach, Mackenzie Ross - Display board [88C]

### ***Sexual Harassment on College Campuses: Creating Safe and Effective Training and Policy***

Amanda Bermudez - Display board [72D]

### ***Post Traumatic Stress Disorder: A Meta-Analysis on the Effect of Exposure Disorder***

Liliana Berzunza, Jill Griffin - Display board [73C]

### ***Importance of Friendship and Life Satisfaction: Does Being in a Romantic Relationship Matter?***

Sarah R L Brown, Kaila J VanSumer, Nicholas M James, Heidi A Wayment - Display board [73D]

### ***The Impact of Exposure Therapy on Claustrophobia: A Systematic Review and Meta-Analysis***

Raquel Daniels, Taylor Leyva - Display board [88A]

### ***A Systematic Review of the Efficacy of Dialectical Behavior Therapy for Individuals Afflicted with Borderline Personality***

Spencer Erdman - Display board [73A]

### ***The Efficacy of Virtual Reality Exposure Therapy on Fear of Flying: A Systematic Review and Meta-Analysis***

Mackenzie Florence, Mandalyn Ryan - Display board [84C]

### ***The Effects Different Presentations of Information Have on Memory Retention***

Moriah Flynn, Daniella Clara, Joshua Terry, Kierston Terry, Kelsey Lamberton - Display board [70C]

### ***Effectiveness and Efficacy of Individual Cognitive Behavioral Therapy in Adolescent Substance Abuse***

Kimberly Foss, Luke Chiverton, Marissa Adkins - Display board [84A]

### ***Socioeconomic Factors and Their Effect on Depression in Young Adults***

Monica Gabriele, Jalen Prayer - Display board [75A]

***Do Professor and Student Gender Moderate the Association between Professor-Student Rapport and Student Success?***

Jenna Girdosky, Whitney Young, Luke Chiverton, Caroline North, Timothy Broom, Nora Dunbar - Display board [73B]

***The Relationship between Anxiety and Academic Performance***

Tessa Grabowsky, Kathryn McKenzie, Kyle Erwin, Jessica Chamberlain - Display board [75B]

***Electronic Technology and the Effects of Sleep Quality in College Students***

Jill Griffin, Jill Griffin, Anna Robertson, Kellie Garrett, Suzanne Daiss - Display board [75C]

***The Social Aspects of Cognitive Remediation Therapy for Schizophrenia: A Systematic Review and Meta-Analysis***

Hannah Harris, Carlene Sachs - Display board [75D]

***The Impact of CBT on Self-Injurious Behaviors in Children: A Systematic Review and Meta-Analysis***

Mariah Hartin, Crystal Rodriguez - Display board [81C]

***Angry Art: How Engagement and Quiet Ego Play a Role in Mood Repair***

Kaleigh Hartzell, Danielle Misiak, Samantha Moss - Display board [76A]

***Cognitive Behavioral Therapy for Schizophrenia in Asian Cultures: A Systematic Review and Meta-Analysis***

Krista Henderson, Wendy Lu - Display board [81A]

***The Efficacy of Maudsley Family-Based Treatment for Anorexia Nervosa in Adolescents***

Brianna Hughes, Stella Elam - Display board [76B]

***The Journey to Self: Revisiting Maslow***

Ashley Hutton - Display board [76C]

***Coping Cat for General Anxiety Disorder: A Systematic Review and Meta-Analysis***

Ashley Kessler, Anna Robertson - Display board [77C]

***Art Therapy Intervention for Diabetes Management in Palau***

Kevin Madden, Ann Collier - Display board [76D]

***Analysis***

Kristen McFadzen, Chris Wilson - Display board [77A]

***Cognitive Behavior Therapy for Pediatric Obsessive Compulsive Disorder: A Meta-Analysis***

Elizabeth McNulty, Jordan Affeldt - Display board [78A]

***Does Professor-Student Rapport or Autonomy-Support Mediate Students' Abilities to Accurately Predict Their Final Grades?***

Caroline North, Luke Chiverton, Whitney Young, Jenna Girdosky, Timothy Broom, Nora Dunbar - Display board [78B]

***The Impact of Assertive Community Treatment on Patients with Schizophrenia: A Systematic Review and Meta-Analysis***

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***Birds of a Feather: Sexual Racism and Experience***

Anwyn Tompkins, Ann Futterman Collier - Display board [79C]

***Treatment Methods for PTSD in Sexually Abused Children and Adolescents: A Meta-Analysis***

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Taylor West - Display board [79D]

**Physiological Markers and Cognitive Factors Affect Human Freeze Response**

Analise Williams, Bradley Dishong, Kelye Scarborough, Felicity Short, Michael Alban - Display board [80B]

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## SBS – Sociology and Social Work

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**Binge Eating Disorders**

Angelica Ayon - Display board [100D]

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Laura Jachimowicz - Display board [97D]

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Laura Saraceno - Display board [93A]

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Clifton Taylor - Display board [93D]

**Eliminating Impulse Eating**

Victoria Vorsatz - Display board [93C]

**My Behavioral Change**

Brianna White - Display board [97C]

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**An Affective Lens: Judgment and Decision****Making Psychology and Affect Theory**

Martha Garner - Display board [91C]

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**University College – First Year Students 111**

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**Alternate Ways to Create  
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LC Bridges - Display board [130B]

**The Healing Tone: Does it Work?**

Caitlin Chatelain, Samantha Witt - Display board [128B]

**Myth of Subliminal Messages**

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**Tunes behind the Wheel**

Michael Joyce - Display board [129D]

**The Effects of White Noise on the  
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Elizabeth O'Brien, Hannah Wiebke -  
Display board [129B]

**Music Taste: Maybe We're Born with It**

Heaven Salvatore - Display board [122A]

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**University College – University Studies**

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**An Auto Ethnographic Approach to Law  
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Brittany Yox - Display board [127B]

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on the Women of Today's Art History  
College Courses**

Nicole Wells, Brittany Yox - Display board [123D]

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## Walkup Skydome

- Parking: Lot P66 (SE of the building) is the closest
- Entrance: Accessible entrance E side of building
- Elevator: Yes, two, one on the SW side and one on the N side
- Restrooms: on Concourse level and field level, both all gender and single stall

## duBois Center

- Parking: Lot P45 (S of the building) is the closest
- Entrance: Accessible entrance SW side of building
- Elevator: Yes, center of building
- Restrooms: on first floor and basement

## Liberal Arts

- Parking: Lot P11 (S of the building) or P5 (NW of the building)
- Entrance: Accessible entrance, main entrance on the W side of building, and S side of building
- Elevator: Yes, S end of building
- Restrooms: Accessible and all gender restrooms on first floor

# Thank You

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We wish to thank the faculty, staff, graduate students, judges, volunteers, moderators, and student ambassadors, without whom this event would not have been possible.

A special thanks goes to the Organizing Committee, especially Becky Butcher, MaryLynn Quartaroli, Bryan Sherwood, and Rob Morrison, and to all the faculty mentors, individuals, companies, organizations, and grant programs that assisted students in the completion of their internships or their research, creative, and design projects.

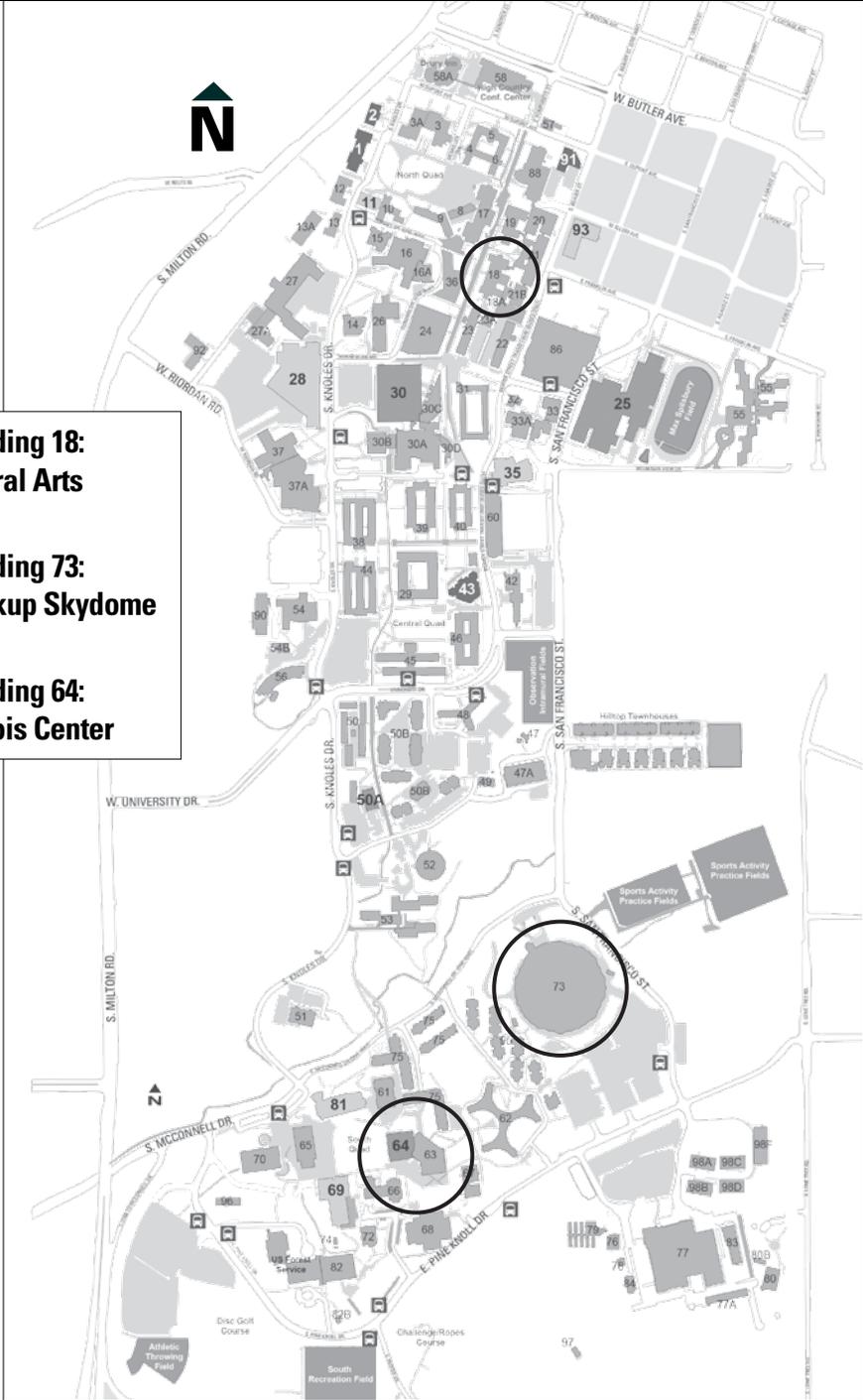
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We gratefully acknowledge the following faculty, staff, alumni, and friends who volunteered to judge for CEFNS, HHS, and SBS. Thanks, also, to the volunteers who signed up after the program print deadline and could not be acknowledged.

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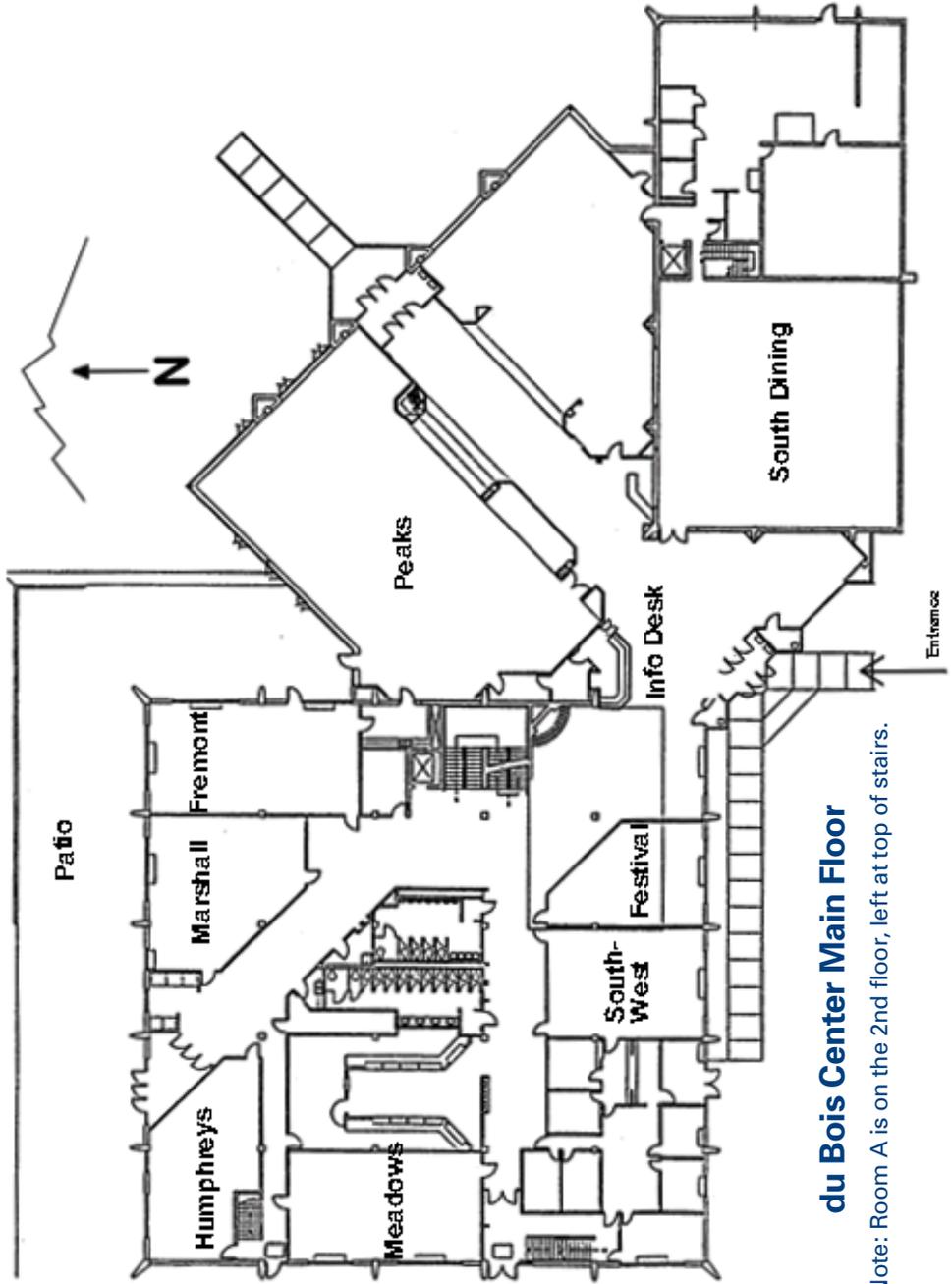
# Map of Campus



**Building 18:**  
Liberal Arts

**Building 73:**  
Walkup Skydome

**Building 64:**  
duBois Center



## du Bois Center Main Floor

Note: Room A is on the 2nd floor, left at top of stairs.

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